BANK COST CONTROL

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By

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With a Foreword by

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A FOREWORD

By R. H. Brunkhorst
Comptroller, Harris Trust and Savings Bank, Chicago

To realize profits, you must control costs. To control costs, you must have the right figures, properly authenticated, and you must have them in time to correct a cost situation before it is too late to stop the loss.

Accounting and auditing are naturally the basis for control. But all three functions must be so harmonized as to work together. This book shows how to bring about this harmony of functions in a bank of any size. It is based on experience in one of the largest banks, but it is tempered by the author's supplementary experience in installing cost control systems in banks of all sizes.

Mr. Young's various suggestions have been tried in banks operating under many different conditions and managed by many types of bankers. As they appear on these pages, they are the result of these many tests.

The instructions to be found here are practical. They are easy to follow. Their observance has brought about desired results in many banks. There are hundreds of banks, however, that have no cost control method, and that is why this book is needed. It is the first work to appear on this important subject.

This is a book for the top man in the bank as well as for the auditor and the accountant. It is a book that should be used as a textbook by directors, and for advanced study in the American Institute of Banking and in college classes on banking.

A board of directors might well use this book as a basis for a two-years' program of improvement. One chapter might well be discussed at each meeting. This would call for an individual copy for each director, and no more practical handbook could be found for developing directors who will build successful and profitable banks.

The author is to be congratulated on the production of a work replete with information on a most important subject, a work that epitomizes his contacts with many banks besides his own, and one that crystallizes in permanently useful form his work as member and president of the National Conference of Bank Auditors and as lecturer to the Kansas City Chapter of the American Institute of Banking.

Its merits, and the bankers of America, should accord it a large and lasting audience.

BANK COST CONTROL

CHAPTER I

THE GENERAL CONTROL

EVERY bank must have some central control of value and transactions. This is accomplished through controlling accounts carried in its general books. These accounts must reflect accurately the resources, the liabilities, and the net daily changes in each. The general books, in order adequately to meet the demands of both operation and control, must bear certain definite characteristics:

1. They must be as simple of operation as the accounts to be controlled will permit.
2. They should carry no unnecessary detail. Subsidiary records should be maintained and, in the main, the general books should record only daily changes.
3. The accounts should be arranged with an idea to their being readily understood.
4. The entire general accounting system should be so arranged that final balance may be reached and accurate figures furnished with a minimum of delay.
5. The general books and all detailed records immediately pertaining thereto should be permanent in nature and compact as to filing-space requirements.

It is with these records that the control of a bank's operations starts. They do not differ greatly from those of any other corporation. They consist of:

1. The original entry ticket or departmental proof sheet
2. A book of original entry—either a journal or a cashbook
3. A ledger
4. A daily balance book
5. A daily condition book or condition sheet

Let us consider the nature of each of these records and the purpose it is expected to serve.

THE RECORDS TO BE USED

The original entry ticket or departmental proof sheet. Transactions affecting values owned by the bank and values owed by the bank originate at various points throughout the bank. It obviously is impossible to take every transaction to the general books and have it entered on the journal. In a bank of medium size there are many thousands of transactions each day. In order that each transaction may be reflected in its appropriate place in the general books, entry tickets are made and passed into the bank's cash. Where many such transactions occur and where, in the main, they are of a similar nature, even the entry ticket is dispensed with, the items being accumulated by totals during the day and the aggregate of all such items

entered in the departmental proof sheet at the close of the day. The proof-sheet totals serve the general bookkeeper in lieu of individual entry tickets, being entered by him in the journal along with other entry tickets.

Through the use of this device, those persons who originate entries may remain at their desks and yet be assured that each transaction will be recorded, either individually or by totals as the nature of the item demands, and, further, that the bank's totals will be duly affected by each transaction. For operating reasons, it is customary for the originating individual to label each entry with his initials. In addition, the matter of control requires that entries of certain kinds be authenticated by the initials of some other designated person who, presumably, understands the transaction and in whom is vested the authority of inquiring into any or all such transactions if he deems it desirable.

The journal or cashbook. Even though subsidiary records are maintained by the various departments, a number of entries affecting the same account may be received by the general bookkeeper. With the exception of a limited number of accounts where detail is required, it is not necessary that each of these entries be posted to the ledger account. For the accumulation of such items, banks have amended the conventional journal into what is termed a cashbook. The names of the accounts are printed in the cashbook, space being

provided for the accumulation of a number of debits and a number of credits under each account, and a third column is provided for the net change in each account. The cashbook is a specialized journal and is the bank's book of original entry. As will be noted presently, the cashbook, when posted, provides the information from which the bank's condition statement is taken, even before the day's changes are posted to the ledger.

The ledger. The ledger is the bank's permanent record of accounts. The various accounts controlling resources and liabilities are carried in the ledger, an account being provided for each class of items.

In the majority of accounts carried on the general books it is not necessary to detail each individual entry; rather, the net of the day's changes as shown in the cashbook is posted to the ledger. An exception to this rule is made where the general books' account is not supported by a subsidiary record, as in the case of the capital account, surplus and undivided profits accounts, and the profit and loss, or charge-off and recovery, accounts. All details pertaining to these accounts are shown in the ledger. In the smaller banks balances maintained with other banks often are considered general books accounts. In such instances the detailed entries may be posted to the general ledger accounts, although it is equally satisfactory to detail entries in the cashbook and post only net daily changes to the ledger.

A good rule to follow on the general ledger is to post in detail only such accounts as are frequently referred to and those which it is desirable to retain over a long course of years in complete form. After ten years have elapsed it is much easier to trace a transaction which is recorded in the ledger than to trace it between ledger and cashbook, particularly if the exact date of the transaction is not known.

The daily balance book. This is the conventional trial balance book, which, in a bank, is completed each day as an aid in securing a statement of condition promptly. Its use will be described more fully later.

The daily condition book. After the close of business each day the bank's financial condition is determined and, through the daily condition book, is reported to the bank's officers. This book is arranged to reflect the various resources and liabilities in some prescribed sequence, according to the needs or desires of the officers who use it.

So by these five records and sets of records even the most trivial transaction affecting the bank's resources and liabilities makes its imprint and is reported to the bank's management.

THE EFFECT OF ENTRIES

It has been said that general books accounts are affected either by direct entries or through accumulations of like entries recorded on departmental proof

sheets. Each department maintains a daily journal called a blotter, wherein charges and credits to other departments are recorded. From the blotter there is prepared, at the close of the day, a departmental proof sheet reflecting the totals of all charges and credits made to other departments.

Through the use of an interlocking proof system, all debits and credits between departments are allowed to "wash," thus removing the artificial totals built up through the transfer of items from one department to another and retaining only the actual changes in accounts. As an example, take a deposit. Suppose the deposit totals $200, of which $100 is in cash and $100 is a check drawn on another bank in the same town. Obviously the deposit increases the bank's liability to depositors by $200. This increase in deposit liability is reflected in a bookkeeper's report of net change for the day, delivered to the general bookkeeper at the close of the day. The cash received increases the bank's cash by $100. The check received increases the bank's resources by another $100, since it is sooner or later converted into cash or its equivalent through clearance. The fact that the check passes through the figures of the distribution department does not in reality inflate the bank's real totals, since the distribution department's charge to the clearings department is offset by the clearings department's credit to the distribution department.

Such a plan gives full effect once to every entry, eliminating inflated totals built up through handling entries in more than one department en route to their final destination. Figure 1 shows, graphically, the passage of entries between departments, and the final centralization on the general books.

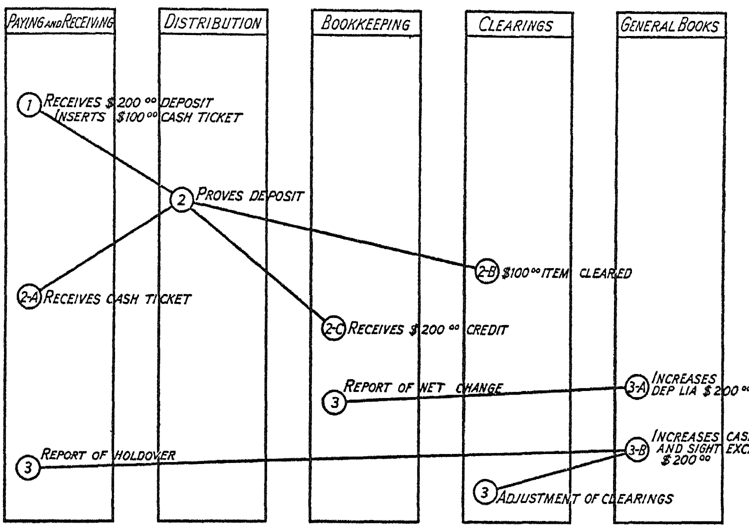

FIG. 1. The passage of entries between departments

PROVING A DAY'S WORK

The underlying principle of double-entry bookkeeping is that for every debit there must be a corresponding credit; so, while the balance is not affected if both debit and credit appear on the same side of the ledger, the balance is affected if the debit is on one side of the ledger and the credit is on the other. In other words, a double entry, both sides of which affect asset

accounts, reflects simply the trading of one asset for another; but a double entry, one side of which affects an asset account while the other side affects a liability account, actually changes the aggregate of both assets and liabilities. For example, the making of a loan exchanges bank cash for notes receivable; whereas the payment of a check actually depletes bank resources and reduces bank liabilities.

The general bookkeeper receives from the various departments entry tickets covering the day's changes in accounts. After posting both debits and credits in the cashbook, he adds to the credit column the cash holdover of the previous day. The excess of the total credits over the total debits represents the amount of the current day's cash holdover, and it is against this total that all departmental proof sheets must balance. A summary of cash held by departments, as shown by their proof sheets, is adjusted by the amount of all known tellers' differences and is proved against the general bookkeeper's predetermined cash total. Tellers' differences are adjusted the following day by authorized entries.

NECESSITY FOR ACCURATE GENERAL RECORDS

It will be appreciated that the presumption upon which any control element is based is the assurance that the details of each day's transactions have been recorded and the results accurately reflected. The

system must be designed to accomplish these results as a matter of course, and controlling accounts must always reflect true totals against which subsidiary records may be proved. The quickest and least laborious method by which these results can be accomplished is the proper general accounting plan in any particular bank.

CHAPTER II

DEPARTMENTAL CONTROLS

DEPARTMENTAL controls are of two general types, designed to meet two distinct requirements: (1) daily controls of debits and credits, both received and passed on to other departments, representing the participation of each department in the bank's general interlocking proof system, these controls having to do with the bank's cash and its equivalent; (2) permanent controls, the books and records reflecting in detail the various classes of resources and liabilities represented by controlling accounts carried in the bank's general books.

DAILY CONTROLS OF DEBITS AND CREDITS

In the small bank the departmental records on control of the details of daily transactions are very simply drawn. They increase in complexity with the size of the bank and its corresponding need for greater departmentalization. In all cases they consist primarily of a departmental journal called a "blotter" and a summary called a "proof sheet."

The blotter. Figure 2 represents a typical bank blotter sheet. Space is provided for each bank department participating in the interlocking proof system. As items are received by a department from other

departments, their totals are credited, in the case of debit items, like checks; charged, in the case of credit items, like deposits. Totals of items going to other departments are entered in the blotter in just the reverse order. The difference between the totals of all

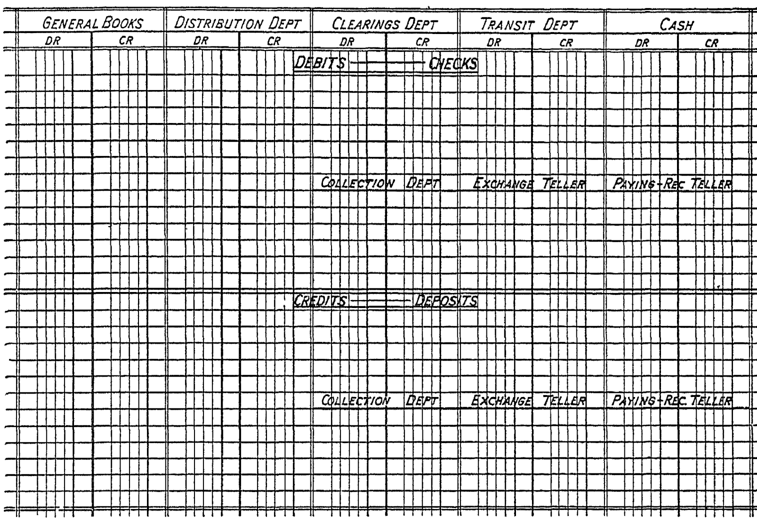

FIG. 2. Discount Department blotter

items received and of all items dispatched to other departments will be found to consist of one or both of two classes of items:

1. Those which are to be entered in the department's own books. These are cared for by the preparation of tickets affecting the various general books accounts. These tickets are delivered to the general bookkeeper and are charged or credited to him on the blotter.

2. Those (cash or cash items) which are to be held until the next business day. These are shown, in the aggregate, as cash holdover and represent a

DEPARTMENTAL PROOF

____________ DEPT ____________ 193___

DEBITS — CHECKS		CREDITS — DEPOSITS	
INDIVIDUAL BOOKS		INDIVIDUAL BOOKS	
COUNTRY BANK BOOKS		COUNTRY BANK BOOKS	
GENERAL BOOKS		GENERAL BOOKS	
BOOKS TOTALS		BOOKS TOTALS	
MONEY VAULT TELLER		MONEY VAULT TELLER	
REC-PAY TELLER NO 1		REC-PAY TELLER NO 1	
" " " NO 2		" " " NO 2	
" " " NO 3		" " " NO 3	
SAVINGS TELLER		SAVINGS TELLER	
EXCHANGE TELLER		EXCHANGE TELLER	
COLLECTION DEPT		COLLECTION TELLER	
DISCOUNT DEPT		DISCOUNT DEPT	
CLEARINGS DEPT		CLEARINGS DEPT	
TRANSIT DEPT		TRANSIT DEPT	
DISTRIBUTION DEPT		DISTRIBUTION DEPT	
MAIL TELLER		MAIL TELLER	
TELLERS TOTALS		TELLERS TOTALS	
CASH HOLDOVER		CASH HOLDOVER	
DIFFERENCE — SHORT		DIFFERENCE — LONG	
GRAND TOTAL		GRAND TOTAL	

FIG. 3. A typical departmental proof sheet

part of the bank's general cash account. The total of these items held over by all departments and by tellers constitutes the bank's cash fund.

The proof sheet. Figure 3 represents a typical departmental proof sheet. When the day's transactions have been handled, each department prepares a proof of the

day's work, reporting to the general accounting department by means of this proof sheet.

The total of the day's debits, including items held over, if any, is struck. The total of the day's credits is struck and proved against the debits. For the purpose of departmental proof, charges and credits to the general bookkeeper are treated in the same manner as are those to any other department. The totals are then entered on the proof sheet opposite the various departments. If the total debits and total credits do not balance, an error in the day's work is reflected, and the extent or amount of this error is recorded by a ticket "long" or "short" and entered in the proof sheet to be reconciled later.

As a result of this series of operations, the charges of one department to another are counterbalanced by the credits of that department to the charging department and *vice versa*. As a consequence all totals "wash" except those representing cash or items held over, which should agree with the general bookkeeper's predetermined total of bank cash on hand. This resolves the bank's many departmental operations into the equivalent of one teller, who handles all transactions in the small bank.

PERMANENT BOOKS AND RECORDS

In considering the permanent books and records of departments, bear in mind the statement made in chapter I that the general books should carry, in the

main, control accounts only, and that details should be shown in subsidiary books maintained by the various departments. One may well imagine the chaotic condition that would exist in a bank where each day the general bookkeeper receives and records each note, each deposit, and each check. The necessity for departmental records is apparent. The plan of breaking down the bank's operations into units of work suitable in size for each man or each department is desirable even in the smaller organizations, since it provides a way for each to operate and prove independently of his fellows. It is unfair to require any person to carry responsibility for values over which he has no control. Even in banks where only two or three people are employed, each person should be held responsible only for values under his own control.

It is not the purpose of the writer to set forth a so-called best plan of record keeping, or to dwell at great length upon the details of the records involved. It is proposed merely to designate the major records necessary for a proper control; whether they be hand or machine operated, loose leaf, etc., is something that each bank should determine for itself.

Departmental records supporting general books accounts may be classified as *resource items:* (1) the record of loan and discount transactions; (2) the record of securities owned; (3) the record of accounts maintained with other banks; and *liability items:* (1) the

record of deposit liability; (2) the record of income and expenses; (3) the record of the capital stock.

Loan and discount records. Loan and discount transactions require a journal wherein entries are made in chronological order. The journal should be designed to show full details, both of the loan itself and of the income collected. For the purpose of reflecting indirect liability, endorsements when present should be reflected in the journal. The journal is a satisfactory one only if it provides all information necessary for the complete reconstruction of the bank's customers' liability ledger, supposing the ledger were accidentally destroyed.

A customers' liability ledger is necessary for recording loans and discounts by borrowers. This ledger may be a bound book, a loose-leaf book, a series of cards—it matters not what form it takes, provided it is convenient and practicable, and provided it reflects accurately the details of the notes held by the bank. Where a customer endorses or guarantees a note for another, his page in the liability ledger should reflect his indirect liability as well as his own direct liability.

A "tickler" is a sort of automatic record showing notes maturing each day, and it is a necessity. The tickler may be in book form or in card form, or it may be simply a copy of the notice to the borrower that his note will mature on a given day. The measure of a

good tickler is not its form, but its efficiency in showing, several days in advance, all notes maturing on a given day.

Collateral registers must be maintained, showing faithfully all values left with the bank by customers in support of their borrowings. Collateral is usually listed under the name of the customer as well as under the class of security. In each customer's account the various pieces of collateral are shown in detail. In the register of collateral securities the names of all customers pledging such securities are shown. In the larger banks this collateral security register is elaborated and becomes the "margin record" used for determining collateral values at any moment.

These four records—journal, ledger, tickler, and collateral register—are the permanent books of account necessary to operate a loan and discount department, whether it be a large one or a small one. Many variations may be made as to form and many elaborating features may be present, all of which, however, are but aids in the operation of these four main records.

Securities records. The securities records necessary to control the bank's investments vary with the activity in the investment account. Except where the bank has a securities trading department, there is usually little activity in this class of assets and a simple register will suffice. This register should show security issues; their exact designation, the date of purchase, the par value,

the purchase price, the due date, the rate, and the dates of interest maturity.

Accounts carried with other banks. Many banks carry these accounts in the general books. There is no more reason for this than for carrying the details of loans and discounts in the general books. It is purely a matter of convenience. Records of accounts carried with other banks take just the reverse form to the records of accounts carried with the bank by others—a debit to the bank's account with another bank increases the balance, while a debit to the account of a depositor decreases that balance. It should be remembered that in the first case an asset is involved, while in the second a liability is dealt with.

The records just described constitute the principal ones used for controlling bank resources. Those for liability records follow:

Deposit records. The bank's deposit liabilities are usually subdivided into several classes, such as individual and firm deposits, bank deposits, savings deposits, certificates of deposit, and official checks outstanding. For each of these classes it is necessary that records be maintained in sufficient detail to identify the deposit and to identify the signature of any depositor desiring to withdraw. For individual, firm, and bank deposits, ledger accounts are carried to which are posted in detail all checks and deposits. Customers of these classes desire to know just how their accounts

stand from time to time. Statements for this purpose are generally run parallel with the ledger and are delivered to the customer periodically, usually at the close of each month.

If the bank has accounts enough to require several bookkeepers, a recapitulation ledger is carried in the bookkeeping department. This reflects the deposit liability for each set of books. The combined total of all sets of books must agree with the account carried in the bank's general books.

Savings deposits change only upon presentation of the savings books, therefore the statement of account is omitted. Otherwise savings accounts are handled much as are the accounts of individuals, firms, or banks. The savings ledger is generally less elaborate than the regular deposit ledger, more often than not taking the form of a series of small cards.

Certificates of deposit are recorded in a register, having columns for the date, the number, the purchaser, the amount of interest allowed upon maturity, and the date redeemed. Since certificates are payable only on their return to the bank, no other bookkeeping is required.

The bank's own official checks—cashier's checks, dividend checks, certified checks, and the like—are recorded in registers showing date, purchaser, payee, amount, and date redeemed.

Income and expense records. The bank's income and expense, when combined, constitute the liability

account, "Current Earnings." Items of income are generally recorded in the general cash book and posted as a daily total to the ledger account, "Income." Subsidiary to this account there is a distribution book in charge of some designated person wherein income is analyzed as to type and as to the resource item or the operation from which it is derived. Somewhat the same procedure is followed with regard to expenses. Both records will be more fully described in a succeeding chapter.

Capital stock register. It is essential that an accurate record of stockholders be kept, showing shares owned. A register is maintained which is posted from the stubs in the capital stock certificate book. The two records, certificate book and register, normally care for this operation.

This casual summary of certain vital departmental records lays a foundation for the discussion of some of the elements entering into control functions. It is not intended to do more than identify the records and indicate their use.

CHAPTER III

SYSTEM

BANK systems and operating methods require painstaking study. What ends are they expected to serve? The requirements vary, but in a general way a satisfactory bank system will bear the following characteristics: (1) it will produce results that are pleasing to the bank's management and to the bank's customers; (2) it will be simple to operate and reasonable in cost; (3) it will lend itself readily to audit control and will contain all possible safeguards against error and dishonest manipulation.

Each of these basic requirements is included for a very definite reason. Consider the installation of a bookkeeping system for the handling of the individual and firm accounts.

To conform to the first requirement, when the day's work is over the bookkeeper must be able to balance promptly and report accurately the day's changes. This lets the management know the actual amount of the deposit liability. The customer cares nothing about the balancing process, but he wants a true and correct statement of his account and all his canceled checks at the close of each month. While the bank's management desires the system to produce all of the results which the customer may reasonably expect as

a matter of bank service, it has other desires about which the customer knows nothing and cares nothing. There is the matter of checks deposited for credit. Both management and customer desire these checks collected without delay; but in addition the management must see that the customer is not allowed to draw against uncollected funds. A better way to state this requirement might be that the management desires the system to produce all of the results which go to make a satisfied customer and at the same time all of the results necessary for positive control of the customer's contact with the bank. Consider the matter of overdrafts. It may be the desire of the customer to overdraw his account and it may be the desire of the management to permit the overdraft, and yet the system must be so arranged that the overdraft is discovered and reported before it is allowed.

So with all bank systems; they must cause a pleasing service to be rendered as a matter of course, and, in addition, must provide the information necessary to control the business. So much for the first requirement.

The second requirement has to do with the efficiency of the system. A system may satisfy the customer and provide all the information desired by the management and yet be inefficient—due to complexity of operation, with an accompanying high cost of maintenance. If costs overrun those reported by other banks of comparative size and character, or if they greatly

exceed the bank's own previous costs, then the system is in need of amendment. Often such a system, even though it has been carefully worked out, embodies some of the unproved "pet theories" of those who installed it and as a consequence has failed in certain vital points. In such a case it is natural to patch it in places, rendering it burdensome or unnecessarily elaborate. *In the main, a system of bank operation should follow standard lines and simple procedures.*

The efficiency of a system from the standpoint of cost of maintenance may be adversely affected by a spasmodic flow of work. In the bookkeeping department idleness may develop at the height of the day's activity, due to delay in the operations of another department from which bookkeepers receive checks and deposits. So the system under which the bookkeepers operate must be coördinated with systems in other departments. Operating "peaks" and "valleys" are thereby eliminated and a smooth flow of items is assured. In working out a problem of this kind, charts of item activity are valuable (Figs. 4 and 5). These charts are designed to show the nature, quantity, and frequency of item movement and provide a basis not only for the allotment of bookkeeping duties but also for the improvement of item receipts and handling. Special arrangements with a few of the larger depositors as to when they will make their deposits may mean a considerable saving to the bank

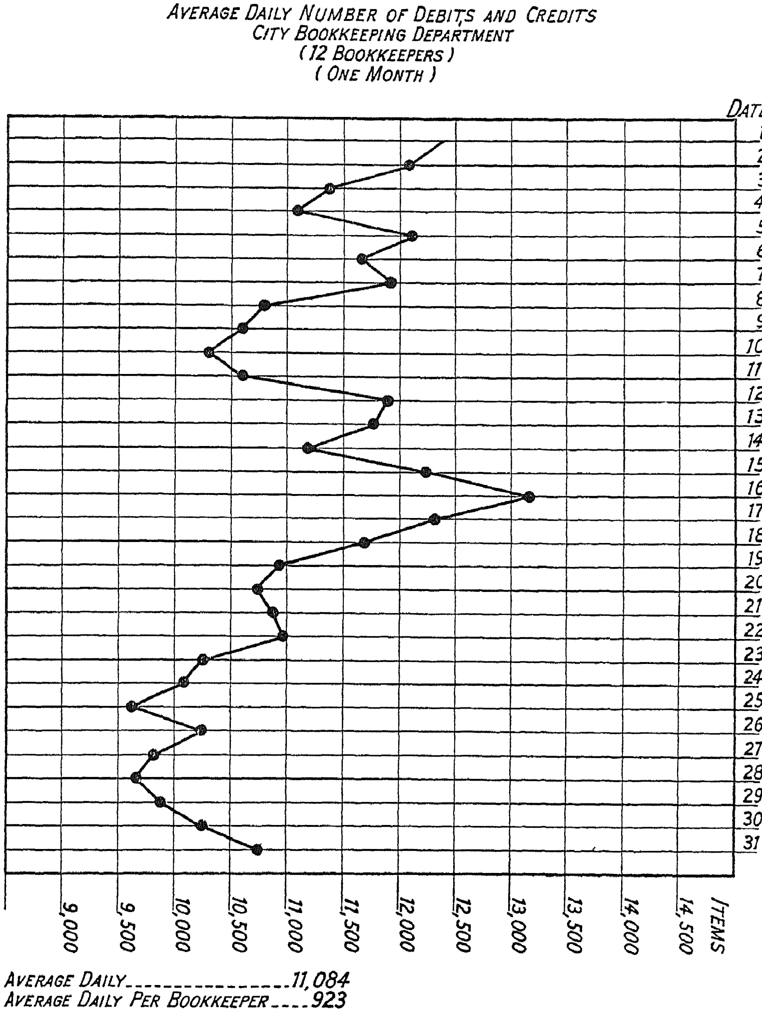

FIG. 4. Average daily number of debits and credits

by the smoothing out of the day's work—and insuring a continuous stream of activity rather than a spasmodic one.

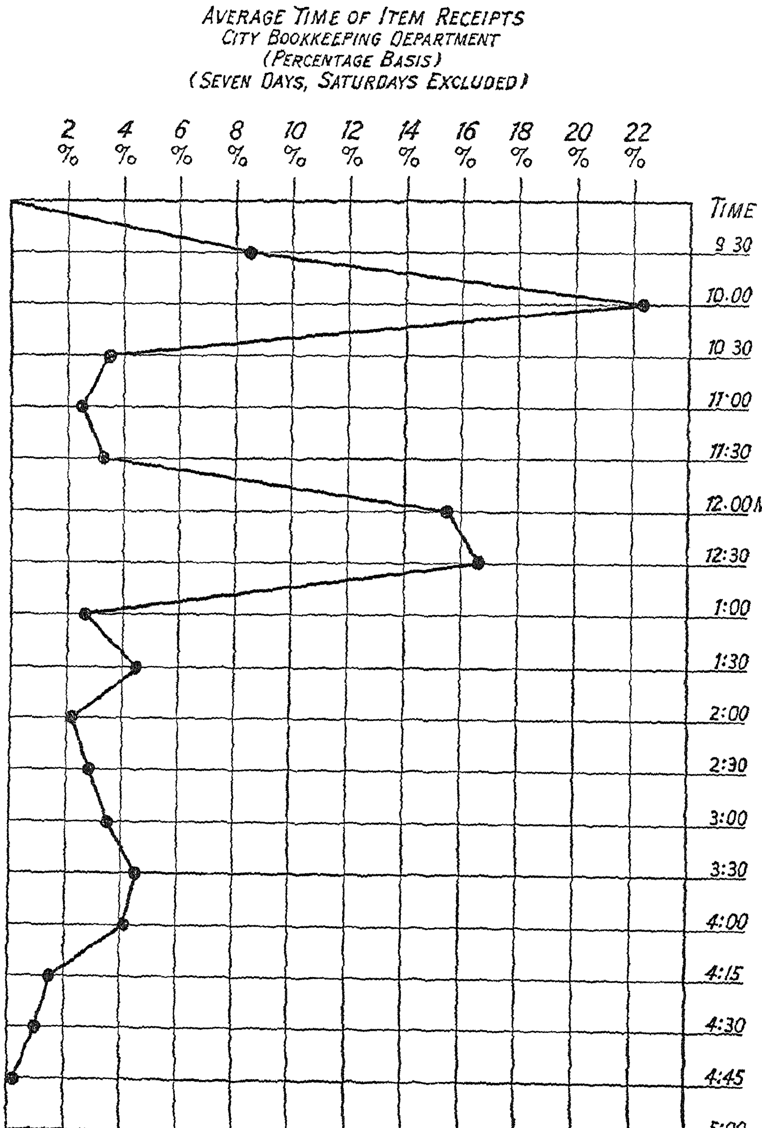

FIG. 5. Average time of item receipts

Another way to a more efficient operation lies in the shifting-crew principle. A schedule of activity in the various departments provides the necessary basis for shifting the people between departments or between jobs for the elimination of peak loads and for speeding up the operation. By this means even a poorly arranged schedule of deposit receipts or clearance hours can be partially neutralized.

In bank operation, duties are frequently assigned to the man, not to the job. This tendency, which is a very natural one, makes for an inefficient bank system. Even though the job may fit the man today, yet, when that man is promoted or leaves the bank and some other must take his place, it may be that the newcomer is not qualified to handle some of the technical or special duties carried by his predecessor. Jobs should have frequent analysis and *technical* duties should be removed from a *detailed* job. It is not uncommon to find a combination of duties in one job, some of which should be performed by a junior clerk, others by a senior clerk. Under these conditions it is frequently the tendency to assign only a semi-senior to the whole job, with the result that money is wasted in the scale paid for the detail work, while efficiency is sacrificed by the inability of the man to measure up to the technical part of the job.

The careful analysis of jobs is a necessity if a bank system is to be efficient.

If the bookkeeping system measures up to the first and second requirements, it will provide for the customer those features he desires and give the management the information necessary for the handling of the customer's account. It will also be satisfactory from the expense angle—simple and efficient. Still, such a system might be the source of a constant danger, so the third requirement, audit control, must be satisfied.

The subject of audit control is discussed in a subsequent chapter, but it is essential that one of its elements be brought out here. That is the element of internal check, or automatic audit as it is frequently termed. *It is one of the vital features of audit procedure, and to be effective it must be built into the operating systems.* The principle of internal check is based upon the common-sense safeguards a person would normally place around his own possessions. It arises from the same thought which prompts one to lock the house when he leaves it unoccupied. This thought is not necessarily that, unless the key is turned in the lock, the house will be robbed; but rather, that if the door is locked it will be more difficult for some one to rob the house. So with a bank system; to surround the operation with reasonable safeguards is to offer some measure of protection against honest error or dishonest manipulation, either of which is costly and embarrassing to the bank.

Since, for purposes of discussion, the bookkeeping department has been taken, let us consider the application of this principle to some of the commonplace operations of that department. There is the matter of customers' statements. After the ledger has been posted and the day's work balanced, checks and deposits are to be posted on the statements. Any bookkeeper can do this job, then why not exchange the statements and require one bookkeeper to prove another's book? From time to time exchanges between bookkeepers for statement postings may be made, so that a third bookkeeper posts and proves a given set of statements. If the bank maintains only one bookkeeper, he can exchange duties with the savings teller or any other designated person for the posting operation.

At the close of the month the bookkeepers must have help in getting statements ready for delivery. A helper may well be assigned whose first duty is to prove the books, independently of the bookkeeper. This practically insures that statements as prepared for delivery reflect the bank's actual totals. Once statements are prepared they might well be kept under lock, to insure that no statement is changed before the customer receives it, thus assuring the bank of one of the finest of audits—direct verification with the customer. Such safeguards cost nothing when worked into the system of operation, yet they supply a degree of protection difficult to accomplish in any other manner. Their

application to other features in the bookkeeping and other departments may be readily appreciated.

There are limitations to the extent this factor can be applied. Normally the operations should not be considerably delayed nor the operating costs substantially increased for the purpose of securing such automatic safeguards.

The three main characteristics of a good bank system have been discussed. Consider now the influence of systems on the bank's operations. To begin with, it is impossible for any one man, and it is not feasible to provide a group of men, to follow every bank transaction in detail. A control of the operation, therefore, must be based on the assurance that the majority of transactions will follow some definite, predetermined course and that any exceptions to the general rule will come to the attention of the proper inspectors. If exceptions are too numerous the task of control becomes burdensome, and revision and amendments are in order.

THE RESPONSIBILITY FOR A RIGID PLAN OF OPERATION

Primarily, the responsibility for good bank operation falls upon the shoulders of the chief executives. To the public they are the bank, and even though every subordinate in whom they have placed confidence should fail them, still, they are responsible. It is necessary, however, that the chief executives delegate

to others the actual operating details, and it is upon these, the operating people, that the real job of system origination and maintenance falls. Operating people should consider their responsibility seriously. Few people in the bank are charged with the responsibility for activities which bear so vitally on the profit account as are those in charge of operations. A great proportion of the bank's expenses arises from matters under their supervision. If the supervision be good, then the money is well expended; if the supervision be poor, then waste results and profits are unfairly reduced.

A lending officer who fails to make provision for proper interest on his loans would soon be dismissed. An operating officer who employs more people or who incurs more expenses than the situation demands, may be just as costly to the bank as the careless loan officer, yet, due to the fact that operation waste is less tangible, he may continue on an expensive scale for years—unless there is a good system of expense control. It is a problem in relative values. What does it matter whether the gross income is reduced through inefficient loan administration or through ineffective supervision of operations? The final result is the same—reduced net earning. A control of bank operation has for one of its primary purposes the elimination of waste. A rigid system, under which like transactions are always handled by the same people in the same way, is the basis upon which this control is founded.

CHAPTER IV

ACCOUNTING FOR FLOAT

THE WORD "float" is relatively a newcomer among banking terms. It means values in checks and drafts, credited to customers' accounts, but uncollected. Upon collection these values are no longer in float; they are then in cash or have become "due from other banks." When customers deposit items for credit and collection the bank's deposit liability accounts show a corresponding increase; actually the effective deposits are not increased until collection is made and the proceeds become available for use. During the period between the date of deposit and the date of realization, float values are shown in various resource accounts on the general books. Where items are handled for collection direct by the bank, or through the Federal Reserve Bank, separate collection accounts are carried; where items are passed to other banks for handling, their totals are included in the accounts "due from other banks."

In a commercial bank it is not uncommon for the float to average from 10 to 20 per cent of gross deposits. Float, therefore, is one of the bank's major elements, both in the effect it has on the bank's general operation and in the effect it has on the accounts of customers depositing items for credit and collection.

Thirty years ago the matter of float received scant attention. Money was not transferred between communities so freely then as now. While there was an element of float then, it did not affect banking operations to the same extent it now does. Few banks felt it necessary to consider float in making interest allowances. The development of float has kept step with the development of communication and transportation.

To many bankers the realization of the effect of float came with the Federal Reserve Banks. To do business with the Federal Reserve Bank it was found that a member bank had to carry two accounts, a collection account representing items in process of collection, and a reserve account representing funds actually collected. Provision was made for transferring balances from the collection account of the member bank to the reserve account as fast as collections were effected.

The Federal Reserve Bank plan provides the ideal way to account for float, but it is not feasible for the commercial bank to apply this method to its own customers' accounts. There are too many of them, and the accounting would be too cumbersome and the expense would be too great. Some substitute plan is necessary; some plan that will produce approximately the same result at a more reasonable cost in time and money.

ANALYSIS OF FLOAT IN EACH CUSTOMER'S ACCOUNT

Records of float deduction on the account of a particular customer may be necessary for some or all of the following purposes: (1) for purposes of interest allowance; (2) for cost accounting purposes; (3) for the maintenance of net average balance records; (4) for determination of daily net balance, against which drafts may safely be paid.

Where an account is stable and where it is known from experience that the bank need take no precaution to avoid payment against uncollected funds, a simplified form of float analysis can be used; but where a check on collected funds is desired, the analysis must be more complete. Consider the first classification, that which will accomplish the first three purposes, to be "simplified float analysis"; the second, that required to accomplish the fourth purpose, is "complete float analysis."

Simplified float analysis. The purpose of this analysis is to determine the customer's total float for the accounting period, one month. As, from previous knowledge, it is not necessary to know the amount of uncollected funds at any given time, it is not necessary to spread the float over the identical days the funds remain uncollected.

Making a dividing line at some convenient point, say at $500, the rule should be that all transit items under

$500 are to be handled in a uniform manner; but all transit items over $500 are to be considered individually. The average time required for collection of small transit items—the regular "run"—must be determined. This may be done by experience tables or by averaging all items received and applying the Federal Reserve Bank collection schedule thereto. However it is done, the answer is to be in terms of days required to collect the average small item. This average time requirement may be two days, three days, or, in the case of a bank located at an inland point, four days. Let us suppose the average is three days.

If the float on the average small item is three days, then every transit item under $500 in amount must be deferred in availability for that length of time. Each transit item over $500 in amount is to be deferred in availability according to estimated actual time. Local clearing items are immediately available if cleared the day of receipt; they are to be deferred one day if received too late for the current day's clearings. In all cases, additional time is to be taken when a Sunday or a holiday intervenes.

When the matters of deferred availability have been determined, rubber stamps should be secured for imprinting the analysis form on the backs of deposit tickets. Figure 6 is a suggestion for such an analysis.

Some form of permanent float record is necessary. This record should combine the float analysis with such

other analyses as may be desired in connection with the accounts. A combination float, interest, and cost analysis record is shown in Fig. 7.

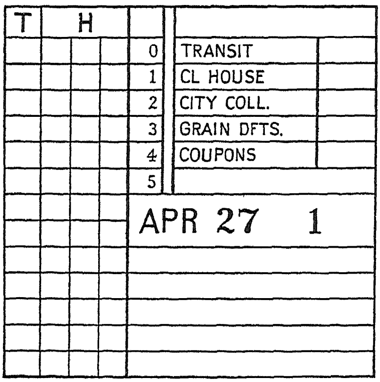

FIG. 6. An analysis form for back of deposit tickets

When the availability schedule has been prepared, the stamp made ready, and the permanent float record provided, it remains only to select the people who are to make the analysis. In the smaller banks the tellers may do this work; in banks equipped with a central distribution department the distribution clerks may do it; in the large banks it may be done by analysis clerks.

Upon receipt of a deposit the imprint of the stamp (Fig. 6) is to be placed on the back. Items included in the deposit are to be sorted as to transit items, clearings items, items on the bank itself, and transit items involving over \$500. As explained, the total of the regular transit items is to be entered opposite the numeral 3. Transit items of over \$500 are listed separately at the bottom of the imprint and should show, for description, American Bankers Association number. Clearing items are to be entered in total opposite the zero if received in time for the day's clearance; opposite the

numeral 1 if received too late for the current day's clearance.[1]

Upon completion of this original float record, the deposit ticket and its items are released for the regular

DAILY BALANCES OF

WITH
ANY BANK
FOR THE CALENDAR MONTH OF ____________________

FLOAT T	H	DATE	DAILY BALANCE	DATE	ITEM COUNT DEBITS	CREDITS	TRANSIT	CLEARINGS	CITY COLL		
		1		1							
		2		2							
		3		3							
		4		4							
		5		5							
		6		6							
		7		7							
		8		8							
		9		9							
		10		10							
		11		11							
		12		12							
		13		13							
		14		14							
		15		15							
		16		16							
		17		17							
		18		18							
		19		19							
		20		20							
		21		21							
		22		22							
		23		23							
		24		24							
		25		25							
		26		26							
		27		27							
		28		28							
		29		29							
		30		30							
		31		31							
				TOTAL							
				COST							

BALANCE		ITEM COST,	
FLOAT		INT PAID	
NET		EX ABS	
11% RES		MAINTENANCE COST	
N L B		CONV COST	
EARN 5%		TOTAL EX	
EX CHGD		PROFIT	
INCOME		LOSS	

$ ____________

FIG. 7. A combination float, interest, and cost analysis record

[1]The upper right corner of the imprint has nothing to do with float analysis. It is for the item count, and will be described later.

proving and distributing operation. Note that the float analysis is made from both the deposit ticket and the items. This is a necessity, as few commercial depositors describe items, and even when descriptions are present they frequently are inaccurate.

After deposit tickets have reached the bookkeepers and have been entered in the books, the float analysis is continued by designated people who post the float totals to the permanent float records (Fig. 7). The respective portions of the deposit, as shown by Fig. 6, are multiplied by the number of days availability is deferred, and the sum of these products is entered on Fig. 7 opposite the calendar day of deposit.

Many variations may be made in the application of such a system. Large depositors may be induced to make separate deposits of float items and non-float items, or both classes may be included in one deposit under separate totals. In smaller deposits, where only a few items are included, the tellers may mark the items by symbols indicating transit, clearings, and so forth, thus eliminating the original analysis. A combination of all of these methods is desirable.

In considering the matter of float accounting there are good reasons for making the original analysis on every deposit, whether it is to be posted for immediate use or not. Consider the matter of cost accounting. It may be desirable to analyze for a year back. This is impossible where float data is not available. Another

reason is the difficulty of picking out the deposits upon which float data are desired, especially where a considerable number of accounts are receiving interest or where a large number of accounts are being cost analyzed. A "clean sweep" makes assurance that all needed data are available.

Complete float analysis. Often it is desirable to know the amount of uncollected funds in certain accounts each day. In such cases the float analysis provided under the simplified analysis plan does not meet the requirement. Another method must be used. In the original analysis, items must be noted for actual deferred availability; the small items cannot be averaged at two, three, or four days as in the case of the simplified analysis. The form shown in Fig. 6 provides for this. Otherwise the original analysis is the same as that provided in the simpler plan.

Figure 8 is a form of permanent float record, designed for complete float analysis. This form has an interest slip attached. It is particularly desirable for use with the accounts of banks and of commercial customers depositing large numbers of items.

From the data on the back of the deposit ticket (Fig. 6), totals are posted on the float record (Fig. 8). Clearings and other items immediately available are totaled and entered as "Immediate." Items subject to deferred availability are to be entered in Fig. 8 and extended downward, those maturing each day to be

dropped before extending the balance to the next day. Each day this process is to be continued, and each day

Immediate T	Immediate H	Date	T	H	T	H	T	H	T	H	T	H	T	H	Ledger Balance	
1	3	21	6	9											8	2
	9	22	5	8	7	6									18	3
3	7	23	3	4	6	9	4	6							19	3
2	4	24	1	2	3	4	4	6	10	8					19	4
4	9	25					2	1	10	8	1	3			15	6
	0	26						6	4	6		3	14	6	11	7
		Sunday						6	4	6		3	14	6	11	2
1	4	28	3	4					1	3				6	8	9
3	2	29	2	3	9	8								3	14	0
4	9	30		3	8	0	1	0							12	0
1	2	31			3	6		4	12	3					10	8
	0	1				6			8	4	0				11	3
4	9	2							6	2			14	3	22	4
		Sunday							6	2			14	3	22	4
		4								2			9	3		
		5											3	0		
		6														
		7														
		8														
		9														
		Sunday														
		11														
		12														
		13														
		14														
		15														
		16														
		Sunday														
		18														
		19														
		20														

In Account With
Any Bank
Anywhere
Interest Statement For

Total Outstanding		Date	Debit Balance		Credit Balance	
6	9	21			1	3
13	4	22			4	9
14	9	23			4	4
20	0	24		6		
13	2	25			2	4
20	1	26	8	9		
20	1	Sunday	8	9		
5	3	28			3	6
12	4	29			1	6
9	3	30			2	7
16	3	31	5	5		
9	0	1			2	3
20	5	2			1	9
20	5	Sunday			1	9
		4				
		5				
		6				
		7				
		8				
		9				
		Sunday				
		11				
		12				
		13				
		14				
		15				
		16				
		Sunday				
		18				
		19				
		20				

The outstanding amounts are for items credited on receipt which were in process of collection The amounts are deducted for the time the items are outstanding

We credit your account $________

FIG. 8. A permanent float record

the ledger balance of the account is to be entered in the column "Ledger Balance." By cross adding, uncollected funds for each day are determined and entered in the "Total Outstanding" column on the interest

statement section of Fig. 8. A study of Fig. 8 will show clearly the mechanics of the posting.

ANALYSIS OF FLOAT IN THE AGGREGATE

Since a considerable portion of the deposit liability shown by the books of a commercial bank is represented by uncollected funds, it is necessary that there be an accurate record of the volume of these uncollected funds. Such records provide a standard by which the activity of the business may be measured and also provide important information to those charged with the lending and investment of the bank's funds.

All collection accounts carried on the general books should be averaged and totaled each month. To these totals must be added the average float in the accounts carried with other banks. This average float can be determined by deducting the average daily balances (as reported by correspondent banks for interest purposes) from the bank's own ledger account and then adding to the resultant total the probable float in favor of the bank on account of its drafts drawn on the correspondent banks. This float arising from drafts drawn on correspondents may be approximated by studying the average time drafts are outstanding and applying this average to the total drafts drawn.

Necessity for accurate float accounting. The bank has little means of checking float deductions. Deductions cannot be proved, as the bank's bookkeeping system is

proved, and therefore care should be used to assure that reliable people are performing this job. Inadequate deductions on interest accounts are costly to the bank in money paid for interest; excessive deductions are costly to the bank through loss of prestige with its customers.

CHAPTER V

ACCOUNTING FOR ACTIVITY

BY USING the bank for the payment of bills by check, for the collection of checks and drafts deposited, for the borrowing of money, for the safe-keeping of securities, and for the many other financial services the bank is equipped to perform, customers create bank activity. Every person in the bank, whether he be in a clerical, supervisory, or administration capacity, has to do with this activity to some extent; as a consequence, activity creates a large share of the bank's expenses. It follows, therefore, that the profitableness of any operation, account, or phase of the business depends to a considerable extent upon the nature and amount of activity it involves.

Activity accounting is of two general types: (1) customer activity, which pertains to each customer's contact with the bank, and (2) departmental activity, which is created by all customers in one department or in one phase of the business.

CUSTOMER ACTIVITY

The bank has three things to offer the customer: credit accommodation, interest on daily balances, and checking and collection privileges. Credit accommodation is extended under favorable conditions. Interest

on daily balances is paid by arrangement. Checking and collection privileges, unlimited as to volume and resulting in a heavy drain on the bank's income, have almost universally been extended to all. Account analysis has been resorted to in recent years, in an effort to end unwise interest arrangements and to provide a measure for gauging checking and collection services which may be profitably extended to customers.

Activity figures are absolutely necessary for dependable account analysis, and certain operations common to all banks, large and small, readily lend themselves to these processes.

Checks and drafts deposited for collection. In the preceding chapter Fig. 6 was used to demonstrate a method of securing original float information. It also provides a means of securing customers' activity information. The words "Transit," "Clearing House," "City Collection," "Grain Drafts," and "Coupons" appear at the right side of Fig. 6, a line being devoted to each. These classifications cover the items drawn on other banks, deposited for credit. Since the customers' checks are chargeable to the accounts of those who draw them rather than to those who deposit them, there is no need to account for them at the point of deposit.

When checks are analyzed for float, they should be counted and the number of checks of each class entered on the back of the deposit ticket in the space provided,

as shown in Fig. 6. Where only a few checks are included in one deposit, it is customary to count them as they are sorted; where many checks are included, the deposit should be proved separately and the count obtained by measuring the adding-machine tapes.

After this original information has been secured, it is posted to a permanent record such as that shown in Fig. 7. Columns are provided for the items of great frequency, such as "Transit," "Clearing House," and "Collection," and a blank column is provided for the occasional items of other classes, such as grain drafts, coupons, and so on.

Checks and deposits. There are many methods for securing a count of checks and deposits. One which seems to stand out in simplicity and effectiveness provides the desired information as a by-product of another necessary operation—that of verifying checks charged to customers' accounts at the time monthly statements are prepared for delivery.

This plan provides that the new balance stub is to be detached from the statement and retained as a bank record. The check verification is secured by counting the checks of each customer, keeping watch over the signatures at the same time, and then proving by counting the charges on the statement. When the two counts agree the verification is complete and the necessary activity information has been secured in so far as checks are concerned. This number is entered

at the top of the new balance stub. The deposit items on the statement are counted and the number entered at the top of the stub, just below the check number.

The check and deposit counts are posted from the new balance stubs to the appropriate columns of the analysis sheet shown in Fig. 7.

Desirability of complete customers' activity data. Original customers' activity information should be secured for every account, even though the permanent record sheet shown in Fig. 7 is not maintained for every account. Where a considerable number of customers' accounts are under analysis, it is difficult to segregate those desired. In addition, if this information is available on the backs of deposit tickets and on new balance stubs, an account may be analyzed for any desired period of time without awaiting the expiration of a certain time, that is, the account may be "back analyzed." In the average bank, activity data may be secured with little additional expense; in many cases, with no additional expense other than cost of forms required.

DEPARTMENTAL ACTIVITY

It seems strange that so many banks provide accurate accounting for dollars dealt in, for the control of the dollars received as income and paid out as expense, and yet fail to make provision for even the most elementary notice of the numbers of transactions. This, despite

the probability that such an analysis would show that many of the bank's transactions are inherently costly and much of the bank's expense needless. A few minutes each day, on the part of those who usually spend the most of their time in "dollar accounting," will provide the necessary information for "item accounting."

Departmental activity should be analyzed continuously. Current data are necessary for three purposes: (1) for the calculation of item and operation costs; (2) for measuring the comparative values of the various classes of deposits; (3) for the control of expense, the management of personnel, and the administration of departmental operations.

The daily departmental activity report. At the close of the day's business, or at some convenient time the following day, each department of the bank should devote a few moments to the activity count. The questions to be answered are: What items were handled? Where did they come from? What disposition was made of them?

Item measures can most easily be provided by running on adding-machine tapes the numbers 1 to 100. These measures are applied to the tapes upon which incoming items were listed. For example, it will be found that the transit department received so many items from the mail, so many from the distribution department, and so on, the sum of all such divisions

constituting the total number of items handled by the transit department for the day.

TRANSIT DEPARTMENT
ACTIVITY REPORT

Date 2/6/33

ACCOUNTING DEPARTMENT:
Under today's date the following transactions occurred:

ITEM RECEIPTS

Mail:		
From Banks	Credits 275	Debits 4675
From Individuals	Credits 120	Debits 1130
Distribution Department		Debits 3690
Clearings Department		Debits 124
In Payment of Cash Collection Letters		Debits 220
Total Number of Items Received	Credits 395	Debits 9839

ITEM DISPOSITION

Transit Sendings:		
To Banks for Remittance		Debits 2707
To Banks for Credit		Debits 1681
To Federal Reserve Bank		Debits 3326
Total Transit Sendings		Debits 7714
To Distribution Department	Credits 395	Debits 480
To Clearings Department		Debits 1645
Total Number of Items Disposed of	Credits 395	Debits 9839

MISCELLANEOUS INFORMATION

Number of Cash Letters Sent Out 230
Number of Employees 11
Number Absent:
Vacations 1
Other Causes 0 1
Number of Replacements Required 0

John Bowen
Manager Transit Department

FIG. 9. A daily activity report

The measures are also applied to the tapes or cash letters upon which outgoing items have been listed.

It will be found that so many items were sent to other departments, so many were sent out in cash collection letters, so many to correspondent banks, and so on.

Based upon this information, the daily activity report should be prepared and forwarded to the person designated to receive such reports. Figure 9 is a suggested form for this report, considering a transit department which handles incoming mail items through its own records. The application of such a report to other departments will be readily appreciated.

Record for accumulation of activity data. Daily activity reports from the various departments should be posted to a permanent record, where the totals may be accumulated by months. This permanent record of activity becomes one of the bank's most valuable records, and the information obtained through a study of the figures it reflects is valuable in determining bank and departmental policies.

Activity charts. In order to reduce the figures reflected by the activity record to convenient form, charts may be prepared. Figure 10 shows such a chart for the transit department, covering one month's operations. Appropriate charts may be prepared for other departments.

The use of activity data in determining costs. The derivation of item and operation costs will receive attention in a subsequent chapter. These costs are

determined by applying expenses to the items handled and the operations performed, allowance being made for unit values of the various items and operations. Item and operation costs provide the means for analyzing customers' accounts. They also, when used comparatively, provide a measure of the efficiency of departmental operations. Where item costs are determined regularly and always by the same methods, fluctuations, if they occur to any considerable degree, indicate the need for study of the department's operating conditions. Often it will be found that the organization of the department is not sufficiently elastic to allow for the increases and decreases in departmental activity, and that the department either is overworked, with a lowering of efficiency, or that it has not enough activity to engage all of its people without waste.

The use of activity data in measuring the value of deposits. The activity of deposit accounts has a great bearing on their value, and a good banker must know the general classes into which his depositors group themselves. This banker knows that accounts maintained with him by other banks will be very active — many debits and credits. Accounts of individuals and firms will be less active, and real savings accounts will be least active of all. A study of activity created by the various classes of depositors, particularly when it is applied along with other cost factors to determine

the profitableness of each class, may have great weight in the consideration of the bank's new business policy. There is always a question as to the proper types of business to be developed.

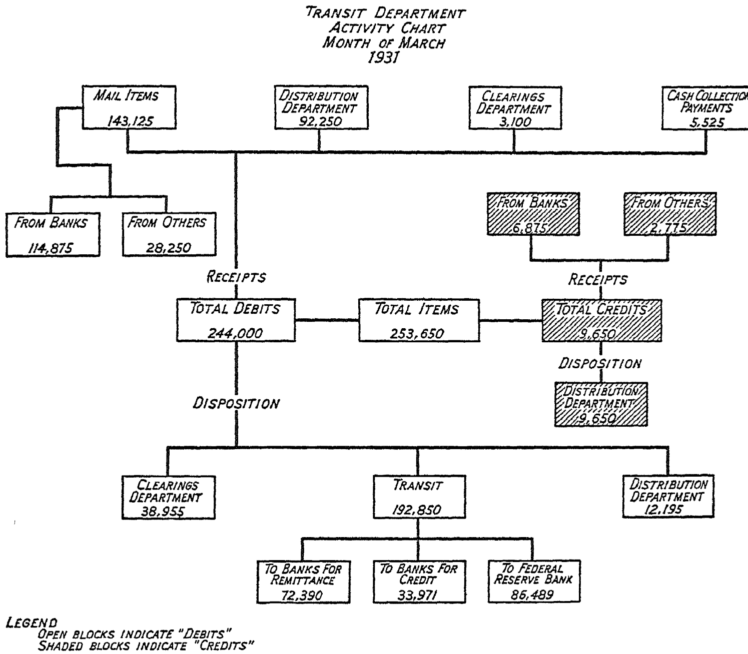

FIG. 10. An activity chart for the Transit Department

The use of activity data for expense control and personnel administration purposes. Bank expenses have a definite relation to the activities from which they result. Too often the expense control is exercised by some one who has no definite information about the volume of work performed. As a result the expenses

are not scientifically controlled and they are not kept in line with the actual flow of activity.

Personnel, equipment, and space may well be allotted on the basis of the number of transactions handled and, to a reasonable degree, each of these factors may be expanded or restricted as activity fluctuates.

Activity data play a great part in personnel management. As an example, consider two departments. The manager of one department, during a period of stress, voluntarily reduces his forces by one man. The other department manager, when approached, makes the assertion that no reductions are possible in his department; in fact, he was just at the point of asking for more help. The natural conclusion is that one manager has a keener understanding than the other of the values the bank derives from his operation. This may be true, and often this conclusion is accepted without further consideration. But does it go far enough? An investigation of operating conditions may show that the activity in the first department has decreased to the point where two men should be dispensed with, and that the activity in the second department has increased to the point that additional help is necessary. Analysis data are a great help in managing departments.

The same principle may be applied to the various jobs within each department. Those who are charged with personnel administration have a serious responsibility and they should be very careful to arm them-

selves with all the information necessary to form accurate and just conclusions before making decisions affecting personnel.

Good management requires good information. In banking as in other lines of business there is no place today for guesswork. Proper management of the business requires, as a minimum, sound accounting procedure, complete in every respect. This chapter closes the series devoted to basic bank accounting. It has been possible to touch upon only the high spots of the accounting network. The basic accounting system provides the groundwork upon which the entire banking structure is built; every important decision affecting bank matters should be reached only after a consideration of the facts developed with the help of the accounting system. Incomplete and inaccurate data—poor accounting—generally mean faulty decisions.

These things have a great influence on the bank's profits and should receive serious attention.

CHAPTER VI

AUDIT PROTECTION

THE PURPOSE of auditing is to guard against honest error and dishonest manipulation. The administrative officers of every bank are charged with the duty of protecting the bank from loss. They are charged with another duty—a most sacred one—that of protecting the people engaged in the bank's operations by surrounding the bank's values with every possible safeguard. A banker should consider that all of his people are accurate and that all are honest; yet he should never lose sight of the fact that people are subjected to strange and unaccountable influences which may, at any time, affect either their accuracy or their honesty. It is incumbent upon the banker, therefore, to provide means of assuring himself, constantly, that all matters pertaining to the bank's values and operations are accurately and honestly administered and that the entire process provides a minimum of temptation to those engaged.

In the larger banks there often is a tendency on the part of the chief executives to appoint an auditor and, after charging him with the job of auditing, to ignore their responsibility for protecting the bank against loss. In the smaller banks, where no one man is designated for the auditing job, there frequently is no effort made

toward fulfilling this obligation. The most dangerous situation is likely to exist in banks of medium size, where an auditor is designated but is given numerous operating duties in addition to that of auditing. The danger lies in the fact that while the management may think it has audit protection, often it has simply placed a dangerous combination of duties upon the auditor; he not only may manipulate the bank's values but also may conceal the manipulation indefinitely.

The responsibility for audit protection is not one which may be charged to an auditor and then forgotten; nor is it a responsibility which may be wholly ignored, as in the case of many of the smaller banks. An auditor is really only a means to an end; at best he can only apply those elements of protective control which common sense dictates. He can coördinate all of the protective features the bank has provided and he can suggest further steps in that direction, but the real job of auditing is deeper than that. It is a thing which requires never-ending vigilance on the part of all of those engaged in the management of the bank and in the supervision of its details. *The auditor who can stimulate this watchfulness and who can coördinate the efforts of all of the people engaged in the operation toward a safer and more accurate performance of the duties at hand is the successful auditor.* Styles change in auditors as in clothing. The old type of auditor, whose methods involved a sleuth-like movement about the office in an

attempt to "get something on some one," has passed out. There is no place for him today.

Bank auditing has become a matter of protective control—foresight rather than hindsight. The good auditor plans to have things happen in a certain way; he does not await the happening before determining whether it is right or wrong. His efforts are directed toward so arranging operating matters that they must come to a correct conclusion. Where the operating plan provides that the majority of transactions will follow a predetermined course, and where the plan is rigidly administered, then only the exceptions need be examined and the auditor has a control of the operation. But when the operating plan is weak, or when it is administered in an indecisive manner, then the auditor is helpless and sooner or later serious trouble will arise.

THE AUDIT PROGRAM

The comprehensive audit program must embrace four features, to wit:

1. Rigid operating systems 2. Coördinated responsibility 3. Severance of continuity	Internal check
4. Actual check and verification	

The first three of these audit features constitute what is known as internal check or "automatic audit." The last represents the detailed auditing efforts of designated persons and *supplements the bank's plan of internal*

check. These four audit elements bear so vitally upon the bank's operations that it seems desirable to discuss each in considerable detail.

Rigid operating systems. In a preceding chapter it was stated that one of the requirements for a good operating system is susceptibility to audit control. This means that a good system provides a way, definitely agreed upon, for the handling of every normal transaction, and it also provides for directing every abnormal transaction to the attention of designated people whose duty it is to decide how and by whom such transactions are to be handled. Such a system makes it possible for like transactions to be handled always by the same people in the same way, and under such a system exceptions should be exceedingly rare.

Even though the systems of operation are good, still they may be ineffective from the audit standpoint. If exceptions are too frequent, then the job of audit control becomes too burdensome — the systems must be rigidly enforced. This is the job for operating people. It is their job to operate under the systems agreed upon with a minimum number of exceptions, and in this way they can contribute largely to the protection of the bank. It is one of the duties of the operating head of the bank to see to it that operating people observe this rigidity of system, and it is essential that observance on the part of every person in the bank, from the vice-president to the office boy, be enforced

if even the first measure of audit protection is to be attained.

As an example of this principle, consider one of the commonest of bank transactions—the acceptance of securities belonging to customers for collateral purposes, for safekeeping, or for sale or exchange. Such transactions as these pave the way for large defalcations in many banks; it seems that bank customers do not exercise even a normal degree of precaution in dealing with bankers. Only designated people should handle such transactions, using designated numbered receipt forms, and no other person should be allowed to accept such securities under any circumstances and no other receipt form should be permitted—the penalty for a single violation of this rule to be instant dismissal.

Bank auditing has its inception in sound operating systems, rigidly enforced, and many defalcations which have occurred would not have occurred had this principle been established in the minds of bankers, irrespective of whether or not an auditing force was maintained.

Hand in hand with the principle of a rigid operating system goes another, that of coördinated responsibility.

Coördinated responsibility. When two or more persons have the responsibility for the execution of certain duties, a coördinated responsibility exists. Almost every line of bank work readily lends itself to the principle, and unless all of the people engaged in a transaction enter a conspiracy to defraud—that is, unless

collusion arises—defalcation is made extremely difficult. A typical example of the operation of this principle lies in the requirement that two or more officers approve a loan, indicating their approval by initialing the note, before it is allowed to go into the bank's resources. Taking the example used in the "system" discussion, that of securities left for safekeeping, consider that the supply of numbered safekeeping receipts to be issued by the individual designated to receive safekeeping securities is lodged with another person, to whom the issuing individual must account for each number. If both the issuing individual and he who has custody of the receipts are required to sign each receipt and then jointly file the securities in a dual-combination safe, a perfect coördination of responsibility exists.

In reality, the audit protection derived from the principle of coördinated responsibility lies in the diversity of interests between individuals, and under such a plan each operating individual becomes, in effect, an auditor.

Just as bank auditing has its inception in sound operating systems, rigidly enforced, so is it furthered through the plan of capitalizing the diversity of interests, between individuals, and the bank that has actively promoted these two principles has traveled a long way upon the road to safety.

Upon the addition of the third of these automatic audit features the internal check is complete. The third feature is that of severance of continuity.

Severance of continuity. While an individual may default and then conceal his theft through frequent manipulations, this concealment depends upon his continued performance of the job through which his opportunity for concealment arose. It is a good idea to break the continuity of each man's encumbrance in his job. Annual vacations, properly arranged, help fill this need. Many jobs have a "focal point"; there comes a time when the concealment must be brought out into the open temporarily. Tellers' jobs and bookkeepers' jobs fall in this class. Tellers' and bookkeepers' vacations should extend over the end of the accounting period (over the end of the month) in order that customers may receive statements as they actually appear on the bank's books, not as they may be made to appear.

Other jobs have other points at which the operator must be on hand to renew or to continue the concealment. Some of these are day by day; others, like savings tellers' jobs, may fall only at semiannual interest periods, and the like. Every member of the bank's staff should have an annual vacation, for auditing purposes if for no other reason.

Frequently it will be found that once a year is not often enough for the severance process. Switches in duties for temporary periods may well be instituted at shorter intervals, according to some schedule which is worked out upon an irregular basis. While operating

officials often object to disturbances in the continuity of the operations of their people, still there are good points to be served through this process, even aside from the auditing feature. These changes provide for broadening the experience of their people and increasing their general efficiency.

In some cases it is possible to secure this break in continuity without an actual exchange of people. As an example of this, consider "tellers' cash." At night the vault may be sealed and the next morning tellers' cash boxes may be completely reassigned, with appropriate reassignment of tellers' cash holdover figures. It is safe to assume that each teller will carefully verify the new cash he has received, and that any differences will be promptly reported.

People who are charged with the responsibility for the safety of the bank's operations may take a great amount of comfort from the operation of this audit feature. Thought devoted to such switches is generally well repaid, and there is almost no end to the lengths to which the principle may be extended. Once off the job, an individual is helpless, in so far as prolonging a concealment of theft is concerned, provided always that the theft is one of overstatement of resources or understatement of liabilities.

Earning items and expense items require a different treatment, which will be discussed in a succeeding chapter.

Rigid systems, coördinated responsibility, and severance of continuity—these things mean internal check or automatic audit. They cost nothing; they may be had or not. They represent the very backbone of a comprehensive audit system. Without them an auditor cannot be wholly successful in providing protection for the bank; with them, he cannot wholly fail in the job. To them, and supplemental to them, must be added the final auditing feature, actual check and verification, in order to round out the audit program.

Actual check and verification. The system of internal check provides for the routine handling of ordinary bank transactions and for the "earmarking" of those which are out of the ordinary or irregular. In other words, it provides that the majority receive normal treatment in a safe manner, while a small number appear as exceptions. The exceptions must be reconciled. Then, some one must constantly follow the system of internal check to insure that it is always operating. Some one must plan and make effective the various features of the protective system. In addition, even values, handled in the normal way, having received the treatment prescribed under the internal-check system, must be verified periodically. The tellers' cash, the collection accounts, and the loans and discounts require frequent independent checking. After collateral securities or safekeeping securities have been filed under dual custody, they must be verified

periodically. Deposit liability requires independent reconciliation in addition to the protection provided under the internal-check system.

In considering the job of actual check and verification, it should be remembered that trouble ordinarily does not arise from the normal transaction. It arises from the irregular transaction—from the exception made to the general rule. Also it does not normally appear after a transaction has progressed to the stage of the ordinary. It starts, just like the trick of the magician, right back at the beginning of things, before the eye is fully open to the possibilities of a situation. One of the primary duties involved in the job of actual check and verification is to see to it that each transaction starts right, that an honest and accurate record is made in the first instance. Unless this is done, auditing is of no avail; there is nothing against which to audit.

An example in point is the acceptance of an estate in the Trust Department. It is necessary that the opening entries and the values intended to be covered be verified against the court order or the appraiser's report. Unless it is assured that the departmental records correctly reflect the facts at the beginning, it is impossible to determine whether or not they reflect true values at subsequent dates.

The job then of actual check and verification is to keep the internal check at work and to supplement it

with common-sense protective features as occasion demands.

The example of securities deposited by customers for safekeeping has been cited in this discussion. Consider, now, the various protective features which have been suggested. The "rigid operating system" provides that only a designated individual may accept safekeeping items, and that a designated numbered receipt form must be issued to the customer. "Coördinated responsibility" provides for a control over the numbered receipt form; it provides for dual signatures on the receipt and for dual filing and dual control of securities. "Severance of continuity" provides for occasional relief of the individuals performing these operations, in order that difficulties or inaccuracies, if any, may come to light. "Actual check and verification" provides for an occasional examination of both securities and records, often with verification direct with the customer, by a complete outsider—one who has no connection with the operation itself. Such is the complete audit program.

In view of this theory of bank auditing, it seems well to reiterate the essence of a statement made earlier in this discussion. The auditor is only a means to an end, and he may or may not do a good job of guarding the bank's values, dependent upon the facilities with which he is provided and the intelligence and diligence with which he makes use of them. In any event, the

maintenance of an auditing staff does not excuse operating officers from fulfilling their obligation for protecting bank values; neither does the inability to afford an auditor excuse them from taking precaution through a good system of internal check.

Bank defalcations weaken public confidence in banks, and they must be reduced to a minimum.

CHAPTER VII

AUDITING RESOURCES

WHILE these comments are not intended to cover the field of bank auditing exhaustively, still it seems desirable to direct attention to a few of the peculiar features which are found in each of the major classifications of bank resources and to include certain suggestions as to the audit control necessary to the protection of these values.

The balance sheet of the average bank shows the following classes of resources:

1. Cash and its equivalent
   - *a.* Cash on hand
   - *b.* Cash items and miscellaneous checks held
   - *c.* Items for clearance
   - *d.* Collection accounts
   - *e.* Due from other banks
2. Securities
3. Loans and discounts
4. Real-estate loans
5. Real estate (Banking House)
6. Customer's responsibility account, letters of credit, and/or acceptances

In addition, the bank has value in furniture and fixtures which may or may not be set up on its balance sheet. There also are items of prepaid expense, such as stationery and supplies, postage and insurance,

control of which is to be discussed in a succeeding chapter on "Auditing Expenses." Finally, there is the matter of charged-off assets, which is also to be discussed in a succeeding chapter. We shall now consider the balance-sheet items enumerated above.

CASH AND ITS EQUIVALENT

The bank's general cash is made up of a variety of classes of items, each of which requires separate analysis and separate audit treatment.

Cash on hand. This represents the actual currency, silver, and fractional coin held by tellers and reserved in the bank's vault. The general accounting system usually provides that all bank cash is under the direction of one teller, who "sublets" cash to other tellers and to whom those tellers must account each day, either by actually turning over all cash held or by reporting the total held at the close of the day. In this case a record is maintained by the head teller showing the amount charged to each teller, the amount he has in his own cage, and the amount carried in the vault. After the day's transactions have been completed, the head teller makes a recapitulation of cash held at the end of the day by all tellers and reports this total on his proof sheet to the bank's accounting department. The plan generally provides that all cash items or miscellaneous checks held by other tellers be actually turned over to the head teller at the close of the day's business

and that the cash figures charged to such tellers represent only currency, silver, and fractional coin. The head teller reports the cash items and the miscellaneous checks in a separate total on his proof sheet.[1]

Under this system of operation the audit of cash is a simple process and may be accomplished either by actual count or by requiring tellers to exchange cash boxes, with an accompanying switch in the totals charged to tellers. Either plan insures that cash as shown in the balance sheet is on hand. The head teller may be audited either by actual count or by exchange with another teller.

Such an audit does not cover a case where one of the tellers withholds a deposit slip, resulting in an understatement of bank liability together with an understatement of bank cash. Matters such as this will be discussed in the next chapter, on "Auditing Liabilities."

Cash items and miscellaneous checks held. Items of this character should be controlled on the bank's general books, separate and apart from the bank's cash on hand. Many banks do not make this separation, including cash items in with cash on hand, but it will be found that a separate control, rigidly enforced, is desirable. Many theories as to the proper procedure for auditing cash items exist, but there seems to be only

[1] In departments, such as the collection department, where it is necessary that numerous items be held over, they are not actually turned over to the head teller, a total figure of all such items being given him and the items being retained by the department.

one plan which is infallible—that of the actual liquidation of all such items. In the case of miscellaneous checks which may be cleared or charged against the bank's own depositors, delivery of the items, with charge to the appropriate department, accomplishes the liquidation; in the case of cash items or collection items, actual proceeds must be inspected and checked in by the auditor. It is important that items included in the bank's cash be not handled by persons handling collections for the accounts of others; these two things form a dangerous combination of duties in that non-cash items may be substituted for cash items and a shortage may be concealed indefinitely.

Items for clearance. Items made ready for the following day's clearance but held in the bank's cash over night deserve frequent audit. An approved method for auditing such items involves the sealing of the items drawn upon each clearing bank, with the inclosure of a letter requesting direct verification to the auditor, all of this to be done after the department handling clearings has filed its proof of the day's work. Scrutiny of all items returned to the bank through "go-back clearings" adds to the effectiveness of the audit and sometimes leads to interesting disclosures.

Collection accounts. These accounts control items which have entered the bank's cash but are in process of collection. Actual liquidation is necessary for a complete audit. At arbitrary dates, detailed lists of

all such items or collection letters should be taken and all remittances examined and approved. Remittances are to be checked off the list until all are liquidated. A close scrutiny of all returned items is a vital feature of such an audit.

Due from other banks. Accounts maintained with other banks should receive daily, weekly, or monthly reconciliation, dependent upon the degree of activity, by some designated person who has nothing to do with day-to-day operation of the accounts and who has no authority to originate entries. Exceptions should be cleared by entries originated by persons or departments whose oversight or lack of information has occasioned the exceptions, and in all cases the reconciling individual should assure himself, through examination of files or otherwise, that the correcting entries are legitimate.

This, briefly, is the story of the bank's cash and its equivalent. Each bank should determine for itself the most suitable procedure for audit protection, bearing always in mind that a rigid operating plan is the basis for all audit control; that a coördination of responsibility, wherever possible, lessens the likelihood of irregularity; that periodic breaks in the continuity of a man's incumbency in a job discourage the concealment and the building up of a shortage; and that anticipation of an imminent actual inspection of cash, items, and accounts by some one foreign to the operation helps

operating people to resist temptations which otherwise may be too powerful for their resistance to withstand.

SECURITIES

The audit of securities must begin with the acquisition of each item. Through a system of automatic audit, or by actual check, purchase price and accrued interest should be verified *and a true and correct record made.* Securities then should pass into dual custody. A simple plan of dual custody may be installed, even in the small bank, the plan becoming more elaborate in the larger bank which has a greater frequency of transactions. In addition to the bank's record of securities owned, the plan should include a simple vault record wherein securities are identified.

After securities have been deposited in the safe, under dual control, they should be frequently examined by a disinterested individual (the auditor). The process is to compare securities with the vault record, which is then reconciled with the bank's record of securities owned.

In banks which conduct an active trade in securities the plan of audit is more complex than that just outlined, but based, however, upon exactly the same principles.

In addition to an audit for identity of items and accuracy of records, a frequent and thorough analysis of security values should be made for determining *value*

movements and trends, otherwise premiums will not be realized or losses will develop unnoticed.

LOANS AND DISCOUNTS

The classification of loans and discounts represents notes, secured and unsecured, taken by the bank from customers to whom advances are made.

Customers' loans bear various characteristics, particularly with regard to their collateral, the nature of which, to a large extent, determines the type of loan, that is, whether the loan has a definite maturity or whether it is payable upon demand or in partial payments; whether the date of payment is based upon the sale date of certain commodities, and so on. The audit program must take cognizance of all such variations.

The audit program pertaining to loans and discounts must insure these things: (1) that every note taken by the bank is filed in the note case and is recorded in the bank's books; (2) that every note in the note case is the correctly executed obligation of the bank's customer, and that it represents values actually delivered to such customers not yet repaid; (3) that the identical collateral turned over to the bank by the borrower is on hand; that it has been properly assigned so that title rests in the bank or its nominee, and that it has been completely recorded in the collateral records; (4) that notes on hand balance with the department's books

which, in turn, balance with the control carried in the bank's general books.

It is considered that in the average bank it is not feasible to incorporate in the regular audit program any provision for passing upon the *sufficiency* of the collateral behind the bank's loans and discounts—provision being made for the consideration of the *identity* of collateral only. If regular examinations by examining authorities are not considered sufficient for the purpose of determining values, then special provision must be made. The annual examination by a committee of stockholders provides a convenient vehicle for this purpose.

The first consideration, from the audit standpoint, is that of the operating system—the lending department must have an established procedure for handling loan matters and for the acceptance and recording of collateral. This definiteness applies both to methods used and to the personnel authorized to handle such matters. *Every item must be handled by the same people in the same way, and the penalty for deviation without especial dispensation must be exceedingly stringent.* This is a principle of auditing that must never be ignored. It is based upon the thought that people hesitate to tamper with the inevitable, and upon the further thought that people charged with the responsibility for values belonging to others must avoid even "the appearance of evil."

The next step in the audit program is that of relieving any one man of the full responsibility for the handling of an entire transaction. The loan committee is set up for this purpose, the dual initialing of each note, the dual checking and filing of collateral—all of these things have their inception in the audit principle of coördinating responsibility. The principle may be extended to great lengths, and each banker should be able to apply it to the end that any tampering with loan or collateral values is made exceedingly difficult. Collateral values in particular are best guarded through this means.

Many banks have worked out elaborate systems for automatic check of collateral through having it received and checked by one teller while the receipt is issued by another, and so on.

Vacations and other prearranged periods of relief for everyone connected with the lending operation are invaluable to the audit program.

Provision should be made for the daily auditing of incoming notes, notice being taken of authentication by designated officers, rates being checked against loan committee minutes, and so on. Frequent checking of notes and collateral by disinterested people, accompanied by occasional direct verification with borrowers, provides the final step in the program. In this audit every item should be carefully reviewed and matched against its collateral, then the whole case should be

proved against the department's records, which in turn are checked against the general books control.

Before leaving the subject of bank loan and discount auditing, it is well to consider a few words of warning:

Study the operation and amend it to the point that every note and every piece of collateral *must be recorded in the department's records.* Trouble rarely arises in connection with a recorded item.

Watch the "in and out" accounts. Loans on commodity shipments, bond trading accounts, and the like are peculiarly susceptible to manipulation.

Be on the lookout for notes signed in advance for use during the absence of the borrowers. If such have been taken, see to it that they are placed in safekeeping under dual custody and that they are properly used.

OTHER RESOURCES

Real-estate loans. If real-estate loans are purchased by the bank from outsiders, they should receive the same treatment accorded items included under the heading of "Securities," plus examination of each incoming item as to assignment of the principal note, title papers, and insurance policies.

If the bank is in the business of making real-estate loans, either for its own investment or for the accounts of others, a whole new field of auditing is entered. Since such an operation is not included among the

departments of the average bank, a discussion of the subject is not included here.

Real estate. The bank's building generally requires audit attention only in connection with income, which may be derived from rental of space, and expenses of upkeep, both of which matters are discussed in succeeding chapters.

Customer's responsibility account; letters of credit and acceptances. A few words on the general nature of letters of credit and acceptances. In effect, a letter of credit is a commitment by a bank to honor a customer's drafts to a specified maximum amount, and is, of course, a bank liability. To offset this liability, the bank requires a cash deposit of the full amount; or a deposit of satisfactory collateral, or merely the customer's promise to make good drafts as drawn. So in the last analysis it has the customer's note, secured or unsecured, a resource item to be audited exactly as prescribed for loans and discounts.

In effect, an acceptance is a commitment by a bank to pay on a date, at a place, a specific draft drawn on it (the bank) by its customer and is, of course, a bank liability. To offset this liability the bank requires from its customer a contract to provide funds to liquidate the accepted draft or drafts at maturity. This contract can be supported by warehouse receipts, bills of lading, or other similar documents, or not, as agreed. So again, in the last analysis, the bank has

the customer's note, secured or unsecured, a resource item to be audited exactly as prescribed for loans and discounts.

Furniture and fixtures. Although furniture and fixtures are frequently charged to expense when purchased and as a consequence do not in such cases appear in the bank's balance sheet, still they constitute a valuable portion of the bank's resources and should be controlled. Each item should be tagged and numbered and book records maintained. Upon exchange of items records should be cleared of old items and the new taken in. A vital part of this control is the checking of all outgoing items to see that appropriate credit comes to the bank from their sale or exchange.

CASE STUDIES

What bank management has not had the disagreeable experience of discovering that some item or items listed among its resources have been converted to private use by a member of the bank's family! Upon each occurrence an earnest effort is made to prevent a repetition in just that place, but it seems impossible to prevent such occurrences altogether. Generally, when a defalcation comes to light, the auditor can see that had he been at a certain place at a certain time, or had he changed some little operation wherein the weakness of the system lay, he might have minimized the occurrence or even prevented it altogether. The auditor today

realizes that prompt detection of irregularity, with immediate stringent action against the perpetrator, is the best possible insurance against defalcation.

As a matter of interest and information, certain cases of defalcation involving bank resource items, which have come to the attention of the writer during recent years, are briefly discussed in the following paragraphs. In almost every case, it will be noted, weaknesses in the audit plan permitted the defaulter to continue his manipulations long after they should have been detected.

Case 1. This case involves actual cash. The head teller of a large bank, a man of twenty years' service, underwent some experience which apparently transformed him from a reliable and trustworthy bank employee into a thief. This man was custodian of the bank's cash reserve, consisting on the average of $300,000 in currency and $60,000 in silver and fractional coin. He had several large compartments in the main cash vault where he carried the bulk of this money, particularly the silver which was largely in package form, stacked in money trays. His cash was audited approximately thirteen times a year by the bank's auditors and at least once a year by outside bank examiners. Yet he was able to conceal a shortage of approximately $2,000 for almost two years.

Each time the auditors appeared, they counted all currency; they then had the silver compartments

opened and took inventory of silver money on hand. Silver trays were stacked in these compartments to the height of about three feet. The auditors did not lift out each tray and examine the contents; rather they contented themselves with pressing on the packages at the front of each tray and when they did not yield, the tray was entered as "full." It finally developed that eight of the trays at the bottom of the stack contained two rows of quarters each rather than the customary three. This case demonstrates a deplorable laxness on the part of the auditing staff but, at the same time, it demonstrates at least two points of auditing psychology of which every auditor may well take cognizance:

1. The auditors did not expect to find a shortage in the cash of this teller of twenty years' service.
2. If, by any remote chance, a shortage did exist, they expected to find it concealed in the currency rather than in the silver, which, by its very bulk, resisted manipulation.

This case emphasizes the old principle that nothing should be taken for granted. To save a little back strain, the auditors decided not to handle two or three tons of coins, with a resultant loss of over $600 a ton.

Case 2. This case involves items held overnight in the bank's cash, frequently termed "cash items." A bank collection department had the duty of returning all "go-back" checks to indorsers, refunding the bank through charging customers' accounts on the bank's

books in some cases, or through collecting direct from customers, either by check or cash, or both, in others.

This bank cleared items for another bank located in a suburban community and of course all go-back items belonging to the suburban bank were handled by this collection department, which turned the items over to the suburban bank's messenger each afternoon, accepting his receipt for the items, and then refunded itself by charging the total to the suburban bank's account.

One member of the department's staff had the duty of keeping the daily blotter, which involved the handling of all in-and-out cash transactions, and he had the further duty of assigning items for collection to the various messengers and checking in their returns therefor. This man created a shortage through withholding cash proceeds of items collected by messengers and concealed it for almost a year, during which period the department was audited at least five times. To effect this concealment he made a daily charge against the account of the suburban bank covering the items returned, securing official O.K. of the entry on the strength of the suburban bank messenger's receipt. The receipt itself he retained in the department's cash. Upon each examination by the auditors this receipt was accepted as a proper cash item upon his explanation that it was received too late to be passed to the books that day.

The defalcation was discovered when, as a matter of auditing routine, the auditing department insisted that this man take a vacation.

This case demonstrates a lack of completeness in the audit program in that the above-mentioned receipt was not seriously questioned by the auditors. It also demonstrates at least three other principles of auditing of which it is well to take cognizance:

1. This man had a dangerous combination of duties. He not only was in charge of bank values but he also had means of converting them into cash independently.
2. Complete liquidation of cash items by the auditors provides the only certain means of insuring their validity.
3. The vacation requirement in this case ended the concealment, and even though the auditing department failed in the regular examination, yet this feature of the automatic audit did not fail. In other words, it's a poor hunter who doesn't make use of both barrels.

Case 3. This case involves discount department collateral and is typical of occurrences which a number of banks have experienced.

A bank had a note signed by an individual, collateralized by marketable collateral. This individual was a frequent borrower—a regular customer of the bank. He went to the bank one day and paid his note.

He then went to the collateral clerk, to whom he said that he was going abroad and that he wanted to leave his collateral with the bank until his return. The collateral clerk removed the collateral sheet from his files and turned the collateral to his own uses. This bank depended upon collateral notations on its notes from which to check collateral records, consequently collateral audits did not bring the difficulty to light. Eventually the owner of the collateral returned and the market having gone adverse to the interests of the collateral clerk in the meanwhile, he was unable to redeem the securities and his peculation was discovered.

This case demonstrates the following principles of auditing:

1. The collateral control system in the bank was weak. Control of collateral requires collateral records built from independent collateral receipts, both from bank to customer for collateral received by the bank and from customer to bank for collateral delivered to the customer. Daily reconciliation of receipts by the auditors with collateral records maintained in permanent form by collateral clerks, or with collateral records maintained independently by auditors, together with frequent audit of securities against records completes this control. This principle in more or less detailed fashion may be applied even in the two-man bank.

2. The bank should make and enforce a definite regulation as regards the safekeeping of securities. It should be made plain to all concerned that "free" collateral must be transferred to safekeeping control. While such a rule may be violated, it acts as a deterrent to such occurrences as that under discussion.

CHAPTER VIII

AUDITING LIABILITIES

THE AUDIT of the bank's liabilities presents problems that are not common to resource auditing. Resource accounts represent values which are at hand and may be actually checked, while liability accounts represent, in the main, values owed to others, often difficult of verification. In the case of liabilities, even more than of resources, people interested in audit protection must depend upon the factors of internal check—rigid operating systems, coördinated responsibility, and severance of continuity in jobs.

The balance sheet of the average bank shows the following classes of liabilities:

1. Deposits
   a. Commercial and bank deposits
   b. Savings deposits
   c. Certificates of deposit
   d. Official check accounts
2. Capital
   a. Capital stock
   b. Surplus and undivided profits
   c. Current earnings
3. Reserves
4. Bills payable and rediscounts
5. Bank's liability account, letters of credit, and acceptances.

The balance sheet does not, however, show liabilities of the following classes: (1) customer's securities held for safekeeping; (2) securities deposited for sale or exchange; (3) collection items held for accounts of others.

The audit of items of these classes will be discussed in a succeeding chapter.

A brief discussion of audit factors involved in the protection of the bank's liability accounts follows.

DEPOSITS

The deposit liability arises from the action of depositors in intrusting their funds to the bank. The danger to the bank lies in the possibility of an understatement of liability with accompanying conversion of bank cash to private use. There are various types of deposits, each of which has its own peculiarities and requires close study as well as the application of audit factors, which are designed especially to meet the conditions under which such deposits are handled by the bank.

Commercial and bank deposits. This classification covers demand deposits, subject to check. The accounts constituting deposits of this character are very active, having almost daily changes in balances. Therefore the protection with which they are surrounded must be largely automatic, that is, it must be built into the operating system.

Today banks generally provide monthly statements of accounts to customers. This necessitates the maintenance of both ledger and statement records on each account. This provision, in addition to answering the needs of depositors for a frequent check-up of their books with those of the bank, provides the basic medium for an audit control of such accounts. This provision for monthly statements to be placed in the hands of the bank's customers does not, however, provide entire protection, for the following reasons:

1. Some customers do not secure their statements from the bank at regular intervals.
2. Many customers who secure their statements do not reconcile them.
3. There is no assurance that the statement prepared for the customer agrees, in every particular, with the bank's own ledger account.

It is evident that the statement system, even though it provides the basis for audit control of deposits of this character, does not constitute a complete audit; other factors must be added.

In seeking further means of assuring the correctness of this deposit liability, as reflected in the bank's book, it is quite natural to turn to the principle of breaking down the responsibility of each operator to the point that he may not, alone, complete the series of operations which constitutes the month's accounting routine. This is done in the following ways:

1. Bookkeepers are required to exchange the work of posting and proving statements against the ledgers each day.
2. Bookkeepers are required to turn over to designated persons (preferably persons not connected with the day-to-day bookkeeping operation) the ledgers, the statements, and all paid checks at the close of the month for independent proof against the control account on the general books and for preparation of statements to be delivered to customers.
3. Bookkeepers are excluded from the "customers' statement" cage. Many banks have found it advisable to mail statements to such customers as may be induced to authorize the mailing process. Statements not mailed should be kept under lock, and diligent effort should be made to effect delivery.
4. Accounts that become inactive are removed from the regular ledgers and are subjected to special control features.

The application of the foregoing, or other features which tend to coördinate responsibility, make the way of the transgressor exceedingly difficult and discourage attempts at manipulation.

The banker is constantly placed in the position of assuring himself that the liability to depositors as stated in the bank's books is the true liability. One of

the surest means of obtaining this assurance, and at the same time the simplest means imaginable, lies in the abrupt severance of a man's operations on his particular job. People having to do with the deposit liability records should of course be required to take annual vacations and they should also be shifted, without warning, from time to time. *Experienced bank auditors place a great faith in this process; it is recognized that an individual is absolutely helpless to conceal a defalcation when he is not on the job to manipulate accounts day by day.* Needless to say, this audit feature is most effective when the absence of the individual from his job extends over the end of the accounting period.

Persistent auditing effort furthers the protection program. Frequent proof of ledger and statements, test check of entries to accounts, and actual verification by letters to depositors are features of the actual audit factor.

Before passing the subject of commercial and bank deposits, consideration should be given two matters which frequently lead to trouble unless they are adequately controlled:

1. Tellers' "floating differences" are of astounding frequency and are difficult to detect. Such differences are created by withholding deposits and accompanying cash for one day and replacing both the following day, new deposits being withheld to cover.

Vacations extending over the end of the month help to turn up such occurrences. Many auditors have been successful in detecting differences of this kind through inspection of deposit tickets. In the majority of banks each teller is required to place a teller's stamp on each deposit ticket he handles. If the inspection of the deposit tickets handled by a teller for a month shows a number of items to have entered the bank's cash at dates subsequent to those entered on the ticket by the depositor, it is well to investigate. There may be a good reason for this variance. An occasional ticket may be misdated, or a depositor may occasionally deposit too late for the current day's work; but where the tickets handled by a teller show a marked trend in the direction of delayed deposits, and particularly when the amounts so delayed have a similarity, it is almost certain that a floating difference is in process.

2. Inactive accounts provide a constant temptation to bookkeepers. They should be kept cleared from the active books and should be carried under a special control.

The following method of inactive account control has been found satisfactory. The books are examined at three-month intervals and note taken of accounts upon which no activity has occurred for six months. A disinterested person (the auditor) and the head bookkeeper jointly remove the ledger sheets, statement sheets, and signature cards pertaining to such accounts,

making debit tickets to eliminate the balances from the various bookkeepers' controls and making one credit ticket to an "inactive balance" account covering the whole. A designated junior officer is then called in, and all three should check the sheets with the tickets and initial, following which the tickets are run through. It is provided that no checks will be paid against the "inactive balance" account, but that amounts may be transferred from the account by means of debit tickets authenticated by both the junior officer and the head bookkeeper.

The ledger sheets are then turned over to the head bookkeeper to be kept in a locked file, the signature cards are turned over to the junior officer to be kept in a locked file, and the statement sheets are destroyed.

Upon presentation of a check against an account appearing in the inactive file, the head bookkeeper determines that the balance is sufficient to pay the check and prepares a debit against "inactive balances" for the entire amount of the balance, together with a deposit ticket to reopen the account. He then refers the check to the junior officer, who compares the signatures. If correct, both initial the entry, return both ledger sheet and signature card to the bookkeeper, and the check is paid in the normal way.

It will be noted that under such a plan the junior officer has no knowledge of balances, while the head bookkeeper has no knowledge of signatures. Both

must pass upon the transaction, and no entry can be effected without authentication by both. Monthly reconciliation of the "inactive balance" control account by the auditor or other designated person completes the operation.

Savings deposits. The problem of audit protection for savings deposits presents features that are not common to the commercial and bank classifications. Savings accounts do not carry active checking privileges and, as a consequence, customers' statements are not rendered. Due to the absence of monthly statements of accounts, one of the primary factors upon which demand deposit auditing is based is not available in the audit of savings accounts. Add to this the inclination of the depositor to go always to the same teller, and it appears that the audit of savings deposits is no simple task.

Many banks place a great amount of confidence in a special savings system, the primary feature of which is a machine operation, performed by the teller. The machine is designed to imprint the same entry in the pass book, on the ledger card, and on a tape. Amounts are accumulated in registers that are kept locked, and any corrections necessary must be made through the machine. Since both pass book and ledger card show the same entry, it is considered that a direct verification of balance is had with the customer at the time of each transaction, and a daily inspection of entries on the

tape, together with a verification of tape totals with net changes reported to the general bookkeeper, completes the operation.

Banks that do not use the machine system depend upon other forms of verification and audit. In the savings department, as in the commercial department, tellers are switched without notice. Often, switches of tellers between savings and commercial departments are feasible. Proof of savings' ledger totals against the general books' control, accompanied by a test check of signatures on checks paid, is helpful. The period of interest payment provides the opportunity for good auditing effort. The process is to station an auditor back of each savings teller to enter interest in the pass book and, incidentally, to verify the pass-book balance with that shown on the ledger card. In the three weeks following interest date it is possible to verify from 50 to 75 per cent of the savings' balances. A difficulty with this plan is that many pass books are never presented for interest entry, and generally it is the same pass books which are missing at each interest date.

Such accounts are generally inactive, however, and a special control of inactive accounts, just as described for commercial balances, helps to nullify this disadvantage.

In the average bank the savings deposit accounts are not well audited. Every effort should be exerted

toward their protection, particularly since their very nature aids the defaulter to hide his manipulations indefinitely.

Certificates of deposit. This is one of the danger spots of the bank. The danger lies in the issuance of a certificate for one amount and the recording of it in the bank's records for a smaller amount, or even the issuance with no accounting whatsoever. A good method of control lies in three things:

1. The absolute control of blank forms, each of which must be accounted for, whether issued or voided.
2. The presence of a "stub" attached to the certificate which must be filled in, from information appearing on the certificate, by the signing officer and turned over by him to the accounting department.
3. Regular reconciliation of the certificate of deposit account with examination of endorsements by some one other than the issuing teller or the general bookkeeper.

Official check accounts. The control of these accounts lies in the control of blank forms, accompanied by independent monthly reconciliation. Segregation of old checks outstanding, with additional control features, is desirable.

In the audit of deposits, as in all other forms of auditing, care must always be taken to avoid placing

in the hands of the auditor, or other person designated to perform temporary or permanent audit functions, a dangerous combination of duties or authorities. *No person performing such duties should ever have signing authority, and there can be no legitimate reason for lodging in such a person the power to originate entries and have them passed through the bank's books.* There is no one to audit the auditor.

CAPITAL

Capital represents the interest the owners have in the bank. These values are segregated into certain accounts—capital stock, surplus, undivided profits, and current earnings.

Capital stock. The maintenance of the bank's capital stock records is generally intrusted to the bank's cashier (or secretary) or some other designated officer. The first element of control lies in the control of the blank-stock certificates. They may well be in dual custody and released only in limited numbers. Upon the occasion of a transfer, the old certificate, together with the new, should be presented to the signing officials (usually the cashier and the president or a designated vice-president) and they should assure themselves: (1) that the old certificate has been properly assigned and canceled; (2) that the new certificate or certificates are for the same number of shares as called for by the old.

As a further precaution, dividend checks should be filled in and mailed by some one other than the individual who keeps the capital-stock records.

Surplus. Entries should be made to this account only at rare intervals and then only upon approval of the managing heads of the bank, their approval to be evidenced by their personal endorsement on the entry ticket.

The surplus account is a special account, generally described and limited by banking laws, and entries to this account should in every instance be made with due regard for the governing statutes.

Undivided profits. At the close of the bank's accounting period—monthly, quarterly, or semiannually—current earnings are closed into undivided profits, as are loss and recovery accounts. Closing entries should be checked by a designated individual—the auditor. Certain items of income or expense not properly pertaining to current operations may from time to time be entered in the undivided profits account and dividends may be paid from this account in banks where day-to-day reserves for dividends are not provided. In all such cases entries should be approved and initialed by the executive heads of the bank.

Current earnings. Current earnings represent the difference between income, expenses, and loss and recovery accounts. Comment on the control of these items appears in subsequent chapters.

OTHER LIABILITIES

Reserves. The liability accounts commonly known as reserve accounts may be divided into two classes, true reserves and anticipated expenses.

The true reserve is an unallocated item, a part of the bank's undivided profits set aside to meet some possible or more or less definite contingency. Such accounts should change only upon authority as provided in the case of undivided profits.

Anticipated expense accounts represent definite, allocated items. They are set up day by day or month by month to "take the edge" from certain anticipated expenses—to even off the bank's earning position. They should receive the same protection as that accorded to expense accounts, which is to be discussed in a succeeding chapter.

Bills payable and rediscounts. These two types of liability are, in effect, borrowings by the bank, secured or unsecured. Original and periodic verification of balances and collateral, direct with the holder, provides a good measure of protection over such accounts. When secured, special auditing care must be given to changes in collateral.

Bank's liability account, letters of credit, and acceptances. In the chapter on "Auditing Resources" a few words were said on the general nature of letters of credit and of acceptances, and both types of items were plainly branded bank liabilities. In addition it may

well be said that the letter of credit and the acceptance become, in plain terms, bills payable of the bank and are to be audited exactly as prescribed for bills payable and rediscounts.

CASE STUDIES

In considering bank liabilities and their protection, the following cases of defalcation which have come to the attention of the writer exemplify the necessity for a constant alertness on the part of the bank's management.

Case 1. This case involves the understatement of bank-deposit liability with accompanying conversion of bank funds to personal use.

A bank bookkeeper opened a checking account at another bank, to which he deposited his monthly salary checks and other items that passed through his hands. He established himself as a regular depositing customer of that bank. He then forged a check against a customer's account on his books, copying the signature of the customer with a fair degree of accuracy. When the check was presented through the clearings, he paid it against the ledger account upon which it was purported to be drawn and the following morning, when he exchanged statements with another bookkeeper for the statement posting operation, the check was paid against the statement without question. Just prior to the end of the month he made up a new ledger sheet and a new

statement sheet, upon neither of which this charge appeared. For convenience in proving, his books were separated into four divisions, a "division total sheet" being maintained at the close of each division. He "doctored" the division total sheet so that a straight list of account balances proved with the total sheets division by division. In this manner the amount was concealed over the end of the month, and beginning with the new month the amount was again charged against the depositor's account. This process was continued for more than a year, in a constantly growing amount, during which period the bookkeeper took a two-week vacation in the middle of the month, leaving the defalcation securely buried in the depositor's account. The difficulty finally came to light as the result of suspicion on the part of an officer in the bank at which the checks were deposited, aroused by the large number of sizable checks so deposited.

Investigation of the incident developed the fact that this bookkeeper's wife suffered from an incurable case of diabetes; that the bookkeeper was unable to supply, from his salary, the funds necessary for the purchase of insulin with which to combat the disease; that prior to the date he started the manipulation the bookkeeper had applied to an officer of the bank for a loan, which, in ignorance of the actual circumstances, the officer refused, and defalcation was the route taken to provide the insulin in the necessary quantities.

This case seems to demonstrate the following principles:

1. The bank is interested in the personal financial affairs of its employees, and each case of financial difficulty should be investigated thoroughly, with necessary action. If it develops that the employee is a waster, then he should be discharged at once; if it develops that he is the victim of unfortunate circumstances, then he should be encouraged and assisted to rehabilitate his financial situation.
2. The principle of automatic audit, termed herein "severance of continuity," is a vital factor in the control of bank liabilities. If the bank completely changed its forces once each year, few defalcations affecting liabilities could persist beyond that period. In the present case each month end was, in effect, a termination point, and had this bookkeeper been away from his job even one month end during the period, his defalcation would have come to light.
3. Having failed to heed the "severance" principle, had the bank proved this bookkeeper's books at any month end and then controlled the customer's statements so that no access could be had prior to delivery of the statement to the customer, this matter would automatically have come to light.

Case 2. This case demonstrates the matter of a floating difference created by a bank teller. This teller fell into the habit of withholding one or more of the cash deposits of a picture theater chain for one day, replacing such deposits the following day by withholding new deposits, and so forth. Of course the amount of the withholding gradually grew to the point that it became unwieldy, and the teller found it necessary to withhold more than one day's deposits and, later, to extend the withholding to other accounts. This led to his undoing, in that one of the bank's customers finally observed the delay. This case indicates the following principles:

1. Tellers should be frequently audited at the end of the month. This teller did not dare withhold a deposit over the month end—on that day his cash was "short."
2. Close inspection of deposit slips as to date will often indicate such a practice as the one just outlined.

Case 3. This case involves inactive accounts. It occurred a number of years ago and, aside from its tragic features, it had a humorous side.

An ambitious young bookkeeper conceived the idea of "corralling" a good share of the inactive accounts appearing on the bank's books (incidentally, these accounts were scattered throughout the bank's ledgers) and turning them to some more useful purpose. In

those days, and in that particular bank, employees were permitted to come and go all during the evening—it was not difficult to arrange to see the last half of the baseball game and then keep books after hours. This young man devoted his evenings to substituting signature cards on inactive accounts—placing in the files his own version of each man's signature. Having finished the job on his own set of books, he extended his activities to encompass the inactive accounts of all of his neighbor bookkeepers. (The bank's officials had not found it advisable to provide locks for signature files.) The man had a little money, and while the signature substitutions were in process he established banking relations with three other banks in the same town. Finally the day for the big "haul" arrived. Checks were prepared and deposited, a few at a time, in the three neighboring banks. By the time the officers of the subject bank began to wonder as to the sudden epidemic of closed accounts, this young man had accumulated almost fifty thousand dollars in the three bank accounts he maintained and had prepared checks for withdrawal. One of the depository banks became suspicious as to its customer's sudden affluence and upon investigation learned that he was employed in the subject bank. When representatives of the two banks got their heads together of course "the jig was up" and the bookkeeper was apprehended. In answer to questions as to his motives, the young man maintained that

it had been his purpose to start a bank—a very worthy motive, perhaps.

This case demonstrates the principle that has been stated so frequently. Inactive accounts are a constant temptation to bookkeepers, and it is incumbent upon bankers to so protect these accounts that the temptation is removed.

The majority of auditing difficulties in connection with capital account items occur in the current earnings classification, made up of income less expense. Both income and expense classifications are discussed in subsequent chapters.

CHAPTER IX

AUDITING INCOME

THE AUDIT of income is a vital part of the bank audit job notwithstanding the fact that in the average bank it is liable to receive scant attention. Many of the problems encountered in auditing liabilities are also encountered in auditing income; the banker is always under the necessity of assuring himself that all items are reflected in the bank's records, and in large measure the audit is directed toward that end.

This is just the reverse of resource and expense auditing—in that case the problem is to insure that all items entered in the books represent true values which are on hand.

There is one point which should never be overlooked in connection with income—the audit must be current, since an item of income that fails to materialize in the bank's income account is practically lost, and unless the deficiency is immediately detected there is little likelihood that it will ever come to light. *To be really effective, the audit of income must be in the nature of a control of income.*

The control system must not only provide verification as to the accuracy of each item of income that appears in the bank's income account, but also it must

seek out all items of income that should appear in the income account but do not.

Having in mind the foregoing, consider now the nature of the bank's income. It is of two general classes, (1) regular income and (2) trading income.

1. *Regular income* represents the return to the bank from the utilization of funds at its command, together with certain other stable and constant income classifications such as safe deposit box rentals and office rentals. Primarily it includes loan and discount interest, interest and dividends from securities, and interest on balances carried in other banks.
2. *Trading income* represents the returns to the bank from personal services rendered, profit from trading activities, and all other classes of non-interest income. It includes such items as trust fees, profit from securities trading, commissions on mortgages, and exchange and service charges.

It is important that the differences in the nature of these two general classes of income be recognized, since the nature of the item determines, to a large extent, the audit plan to which it is susceptible. The four principles of bank auditing set forth in a preceding chapter are all applicable to income, but in addition there is a highly specialized system of control which will provide absolute assurance that all *regular income* is received and that once received all income, both regular and

trading, is controlled and safeguarded. This system has to do with income accrual and is more fully set forth in the following paragraphs.

REGULAR INCOME

In most banks the major share of the income is of the nature classed herein as regular income. The audit job is that of accounting for all of this income and of insuring that it enters the bank's income accounts and stays there. It may be possible to check, by manual effort, every resource item the bank has at each interest maturity date, but such a manual procedure is neither practical nor sensible. *The only practical means of auditing regular income is that of an accrual control.* Through this means each day's income is accrued in the income account daily and must be either collected or adjusted before the record is cleared. *A bank that installs an accurate and comprehensive system of income accrual, and operates it in an intelligent manner, is assured of receiving all income due it; a bank that does not operate under such a system cannot know, without a prohibitive expenditure of time and money, whether or not all income due it is received.*

There are a number of systems of accruals in use in banks. A system that provides an automatic and direct check of cash against accrual and sets the two up side by side is preferred. Unfortunately for the purposes of this discussion, accrual processes are

the private property of the owners and installers of the system and all essential forms are patented. In general terms it may be said that such a system provides for the calculation of the daily earning power of each resource item—each note, each security, each bank balance, or each rent item—and it further provides for immediate adjustment should any such item change in amount or in rate of earning or if it should pass out of the bank's resources altogether. The system is closely interwoven with departmental operating plans, and as a by-product it provides a control over the resource items from which the income is derived. Once installed, it is both simple and economical of operation and may be applied with equal satisfaction in banks of $100,000 in deposits and banks of $100,000,000 or more in deposits. This system is intended to provide accurate earnings figures for bank statement purposes. Incidentally it provides a perfect audit control over the bank's regular income.

The audit of the bank's "regular income" is one of the really vital features of a comprehensive audit system. Care may well be exercised in the selection of the accrual control system.

TRADING INCOME

The general class, trading income, encompasses many varieties of bank income. The principal varieties are the following:

Exchange. This is relatively a small item except in banks that charge exchange on their own items and in banks that assess a combination interest and handling charge for handling checks drawn on points foreign to their own communities. In the average bank, collections of exchange arise from transactions as follows:

1. Charges to customers covering exchange actually paid by the bank for collection of drafts and checks in other localities.
2. Charges made against customers or non-customers for presentation and collection or return of drafts drawn on individuals and firms located in the bank's own community.
3. Occasional charges, usually to non-customers, for cashing out-of-town checks, issuing cashier checks or bank drafts, effecting installment note collections, and like services.

The audit control over such items must come primarily from the system employed in their handling. The system should include the plan of requiring more than one person to participate in the recording, collecting, and entering of exchange, and in many cases it will be found desirable to have copies of original exchange tickets go to some designated person (the auditor) for independent checking against the items entered in the income account. This is a problem for each bank to solve for itself, the solution depending upon the volume and frequency of exchange charges and the nature of

the items upon which charges are made. The matter deserves considerable thought. Although it is a very common item, exchange provides one of the most difficult of bank-audit problems.

Service charges. Service charges should never be assessed by bookkeepers or others immediately connected with the bookkeeping department. They should be calculated from information supplied by bookkeepers and the total of all charges entered as one credit to the income account, both charges and credit to be initialed by some designated person who has been assigned the duty of following such items. Copy of the credit, with adding-machine tape listing the charges, should go to the person designated to safeguard the bank's income (the auditor) for test check and occasional complete check.

Miscellaneous profits. Although such items arise in all parts of the bank, the power of entry to the miscellaneous profits account may well be restricted to a limited number of people in whom is vested the right of inquiry into any or all miscellaneous transactions. If a representative group of officers is chosen for this purpose—officers stationed in the various departments of the bank—they are likely to have some familiarity with the majority of the bank's miscellaneous transactions and, through their knowledge, some measure of protection is obtained. In all cases copies of such entries should be delivered to the auditor.

Trust fees. Fee cards prepared from trust agreements, and other material in the Trust Department showing agreed rates, fee dates agreed upon, and the like, should be maintained by the Trust Department. A monthly or quarterly check of fee cards against trust accounts, and against entries to the income account, provides a good audit of trust fees. In large trust companies more elaborate means, founded on the fee-card principle, are employed. In all cases delinquencies must be followed to the point of collection or adjustment.

Profit from sale of securities. In banks wherein profit from the sale of securities is restricted to occasional transactions involving the sale of securities carried in the bank's investment account, records of sales may be checked against the income account by persons participating in the dual custody of the securities.

In banks that transact active trade in securities, the vault custodian maintains an in-and-out record which must be supported by copies of the purchase and sales bills. It is his duty to verify prices and extensions and to prove totals of both premium or discount and accrued interest against daily entries to income accounts. In extremely active trading departments a special custodian is provided, one of his major duties being the proving of entries to income accounts. Trading income from securities sales must be checked currently, and in volume operations this checking should be done before the transaction is completed and funds either paid or received.

INCOME SUMMARY

The bank's income accounts provide the favorite field of endeavor for the defaulter who has become responsibly placed in the bank and who thoroughly understands bank routine. Substantial defaults affecting bank income almost invariably are perpetrated by some trusted member of the bank's staff, and the average bank is at the mercy of such a man. Missing income is hard to detect, and once diverted from its routine channel such an item rarely reappears—it is gone forever. As opposed to this, a converted resource item must be concealed and eventually accounted for, and an understated item of liability is bound to come to light sooner or later unless reëstablished to its proper amount with accompanying like additions to resources. For the reason that income, by its very nature, is not a recurring item, audit treatment of income accounts must be highly specialized and it must be current.

If you review your banking experience, you probably will recall few cases of income defalcation. It is likely that such cases will bear a very small ratio to the total cases that have come under your observation. The reason for the smallness of this number as compared with other types, all too frequent in the banking business today, is not that they do not exist—*they do exist, but they are rarely detected.* Cases have come to light where the practice of withholding income has persisted for years and years, according to confessions made, and

even then, unless an accurate record of such illegal transactions was maintained by the defaulter, it has been found impossible to check out the deficiencies and compile an accurate total of the loss. Such being the case, it stands to reason that a great percentage of such occurrences are never detected.

Income withholding is a "blow below the belt," and frequently banks have no defense. Actual experience with this condition led the writer to state, earlier in this chapter, that the only practical way to control the bank's major income classifications, herein termed "regular income," lies in an adequate accrual control system under which the daily earning power of each item is set up, to be eliminated only by actual cash collection or by charge-off. That statement is here reiterated, with the further statement that while the audit control of regular items of resources and liabilities is important, the control of income is even more important if the bank's values are to be protected.

The bank's income accounts are peculiarly susceptible of manipulation by the bank's auditor and, generally, when such a deplorable incident occurs, it will be found that the bank's management has failed to appreciate one or both of the main principles of bank audit protection:

1. The auditor is only a part of the audit program. The maintenance of an auditor does not relieve the management from the duty of having ordinary

care exercised by operating people in the performance of their duties. The auditor is subject to the same human frailties existent in operating people and, sad to relate, some auditors do not measure up to their calling.

2. The auditor should be free from operating duties and *must not be permitted the right of entry against the bank's books.* Dangerous combinations of duties on the part of the auditor have been responsible for great troubles in some banks.

CASE STUDIES

Two cases of such failure on the part of the auditor are listed below.

Case 1. In one large American bank the auditor, being a thoroughly trusted individual, was given free rein in the protection of the bank's values and operations. Having turned this job over to him, the management apparently felt that the ultimate of audit protection had been accomplished and they devoted their attention quite exclusively to other subjects. This individual was well trained for the job and really accomplished good things in the way of system routine and individual audit effort. He made his presence felt in the bank. Although he was able, to some extent, to control the acts of his fellow workers, he found, strangely, that he could not control himself. He arranged, as an example, that all coupons clipped

from the bank's securities should be sent to the audit department for check and entry. He retained certain coupons from certain types of unregistered bonds and negotiated them to his own personal advantage. Finally, after several years of this practice, some spark of his former self came to the surface and he went in and told the chief executive all about it, asking his forgiveness and the right to make restitution without prejudice. This was refused.

This case demonstrates the following point, which should be present in the mind of every banker:

> The vice-president under whose charge the securities were lodged subjected himself to grave censure in permitting such a dangerous scheme to be placed in operation. He should have known that such a plan violated every principle of good auditing which, after all, involves purely the application of common sense, and he should not have permitted the violation without strong protest to the managing officials.

Case 2. A young man established an enviable record as the assistant auditor of a large bank. He then moved to a bank having resources under $20,000,000, and became the auditor of that bank. He was so apt at solving bank problems that soon he was made an operating officer of the bank, at the same time retaining the auditor's duties. Among other duties he was placed in charge of personnel and routine operations.

The bank's personnel whom he was expected to audit worked directly for him. They received his orders and carried them out. He also was given the right of entry against the accounts on the bank's books and the right to sign the bank's official checks. As auditor, one of his duties was the making of the bank's operating reports wherein income and expenses were set forth and analyzed. In short, the bank's operating officials "took him to their hearts" and, as it later developed, he "took" them.

Something happened to this man, one of those things which could never be understood unless one had access to his innermost thoughts. After a clean record of fifteen years in the business; after an experience which fitted him for great things in the field of bank management, and standing upon the very threshold of success in a fine bank, the management of which already was accounting him one of themselves, he developed the habit of stealing money from the bank. His plan was to make interest rebates in excess amounts on repurchased commercial paper, receiving cash for such amounts through a complicated process involving the bank's official check account and the bank's tellers, all of whom worked for him and none of whom appeared to question his acts. The excess rebates he buried in the bank's operating statement through showing net amounts of interest received. His detection came about through an accident, the entire occurrence being

of too recent a date and of too intimate a nature to outline thoroughly here. Suffice it to say that in about two years of such operations he defrauded a bank of this rather limited size in an amount exceeding $30,000, and would have been able to continue indefinitely, apparently, had not an out-and-out accident occurred, leading to his undoing.

Consider, now, the great harm that resulted from the compound misfortune of lack of caution on the part of the bank management and betrayal of his trust on the part of the auditor. The bank and its customers were agitated and disturbed. Such events leave their marks. The managing officers had their confidence violated and their trust in people is at least badly shaken. The unity or *ésprit de corps* of the bank's staff suffered a blow which only years can heal. For the auditor—a brilliant career ruined. It might be said that such a man deserves no thought, that having the desire to steal he would have found some means of accomplishing that end regardless of his situation in the bank. That, however, is problematical. It is a fact that at the time his defalcation was detected he was urging the management to permit the installation of a comprehensive accrual system, undoubtedly with the view of breaking himself from the dishonest habits he had acquired.

It should not be surmised that the auditor is the only man in the bank who might tamper with bank

income. The following is a case involving personnel of an entirely different grade.

Case 3. A discount teller fell into the habit of removing cash from the bank's discount department cash drawer and using the money. He had three means of covering up the shortage, one or more of which he would use on each occasion. The favorite and original method of covering had to do with excessive rebate charges in cases of prepaid loans, particularly those bearing partial-payment features. The overage, of course, went not to the customer but into his own pocket.

As time passed and the ever-present urge for "bigger fields of operation" grew more insistent, he extended his operations to include misstatements of interest collected. This process involved the making of correct interest tickets on individual discount transactions, which were correctly posted the same day on the discount journal. Immediately following this posting operation he recovered the tickets and substituted tickets for reduced amounts in certain instances, these being the tickets which he entered in the daily blotter. An income entry to the bank's general books was then made, based on the blotter figures. Growing more careless, he finally discontinued the changing of tickets and simply made the income entry to general books for a fictitious amount, which eventually led to his detection.

This case indicates the following point:

Simple as was the system of defalcation employed by this teller, yet it took the bank almost three years to stumble on to it. Had every rebate entry been verified, had every interest income entry been compared with the discount journal, and had every entry to general books income account been analyzed as to what items supported it, this difficulty would have been ended at its first occurrence. But such checking operations, if conducted in detail throughout the bank, would be expensive to the point of prohibition—that is not a practical way to protect such operations. A practical means of income audit lies in an accrual control, item by item. Remember that income items do not reoccur. When this discount teller succeeded in having his total daily income entry approved, his troubles were over in the absence of some comprehensive audit program. Unlike the situation created, had he converted the proceeds of some note or other item of bank assets for which he eventually would have to account, the income, once converted, was out of the picture permanently.

CHAPTER X

AUDITING EXPENSES

IN CONSIDERING the audit program to be applied to expenses, two thoughts should be kept in mind: (1) expenses are to be audited for validity, that is, that they are honest expenditures for which the bank receives value; (2) expenses are to be audited for usefulness, that is, that they are necessary for the successful operation of the bank's business. Having these two audit requirements in mind, it is clear that proposed expenditures must be audited before payment is made; in other words, expenses must be controlled.

Many classes of expenses are subject to audit through the control system alone; others, like interest paid, require in addition to the normal control system a considerable amount of detailed checking. For the purposes of this discussion expense items are divided into two general classes:

1. Major routine expense items, not supported by bills and normally not paid by check. This class includes salaries and wages, usually paid in cash, and interest, usually paid by debit against the expense account.
2. Other expense items, usually supported by bills and usually paid by check. This class includes all

of the ordinary items of bank expenses other than salaries and wages and interest paid.

MAJOR ROUTINE EXPENSE ITEMS

Salaries and wages. For pay-roll purposes, the bank's paymaster maintains records of officers and employees and their salaries. Some other designated person, normally some one attached to the audit end of the business whose duties include that of expense distribution, also should keep records of officers and employees and their salaries, these records to be kept in constant agreement with those maintained by the paymaster. In carrying out the expense distribution job, the auditor secures an automatic check of salaries and wages, since the total amount distributed must agree with the paymaster's debit to the expense covering the pay roll. This audit is made even more effective by a monthly departmental expense report showing, among other things, the number of the people and the monthly salaries charged to each department, a copy to go to each department head.

In the case of people who are paid both salaries and commissions—bond salesmen, for instance—that part of their remuneration which is based upon commissions from sales should be checked in detail against sales records.

The series of operations just outlined provides for the audit of salaries and wages as to validity.

The usefulness of the expenditure is quite another matter and is largely a problem of management. There is, however, a place for audit effort in this connection, since a dollar misappropriated or a dollar wasted has the same effect on the bank's profits. The auditor's place in this management problem is one of comparative analysis—an analysis of transactions and salary expense per transaction accompanied by comparisons with certain standards which may be standards obtaining in other banks or standards shown by the bank's own experience, either or both. So it is evident that bank management can well call on the auditor in determining the usefulness of practically all bank expenses.

Interest paid. Banks pay interest for borrowed money and for certain types of deposits. That paid for borrowed money is easily audited by a check of the bill rendered by the lender, against the bank's own records. That paid to depositors is difficult of audit, and the audit plan must be carefully worked out and applied.

Bookkeepers and others having direct contact with customers' accounts should not be charged with the duty of interest calculation and payment. To place on such people the responsibility for the determining and payment of interest is to invite manipulation. This work should be done, and all interest entries should be originated, by people who have no direct connection

with customers' accounts, whether they be savings accounts or commercial accounts.

It is not feasible to have an auditor check every interest calculation, prove the aggregate against the expense debit, and trace every item to the customer's account, even though such a procedure would be highly desirable. To a large extent the system under which interest is calculated and payment is made must be depended upon to protect the bank against overpayment of interest, and as a consequence all of the elements that tend to further the factor of automatic audit must be embodied in the system.

Interest can be "test checked," however, both as to accuracy of calculation and as to payment. The process is to choose items at random or to choose items according to some prearranged plan, all such items to be verified and traced to the depositor's accounts.

Interest paid may be proven in the aggregate, with reasonable accuracy, through the daily accrual plan—a feature of the accrual accounting system mentioned in the preceding chapter. The plan provides for a daily accrual of interest liability incurred on each class of deposit at an average rate, set up from past experience. This is, of course, a "weighted" rate, making allowance for float and other normal deductions. While this plan is not accurate to the dollar, still it provides a safeguard against any considerable overallowance of interest.

In interest, as in salaries and wages, the audit job merges with that of management in protecting the bank against unwise interest expenditures. The auditor's place in this operation is that of cost analysis of deposit accounts, a matter that is fully discussed in succeeding chapters.

OTHER EXPENSE ITEMS

The remainder of the bank's normal expense items fall in this class and in a general way are subject to a common control and audit procedure. They are similar in that they are incurred by requisition or are supported by bills from the venders, either or both.

The bank should adopt certain ironclad rules with respect to incurring expenses, and it should provide some definite system of authentication and payment. Normally, some officer or officers of the bank are designated to originate purchases and to pass upon current expense items, and in such cases the responsibility for the bank's expense account devolves upon such officer or officers. The job of auditing is to insure that all expenses paid have been approved by this established authority and to insure that the bank receives values in return for funds disbursed. Let us consider the following main classifications of such expenses in a bank:

Rent, light, and heat. The items of rent, light, and heat are grouped for distribution purposes. In the

main they are stable expenditures, varying little from month to month. Such items are audited by verification of expense checks against expense bills at the time expenses are distributed to departments, usually prior to the mailing of expense checks.

Telephone and telegraph. Excessive use of telephone and telegraph messages is a common abuse. A frequent restatement of the bank's policy with regard to the use of long-distance telephone and of telegrams is beneficial in keeping these expenditures under control. From time to time officers and departments should review their telegraph and telephone charges for certain periods. This practice is a considerable money saver. The problem of audit is twofold:

1. To see that all fees rightfully chargeable to the bank's customers are so charged, with appropriate credit to the telegraph and telephone account.
2. To see that bank people do not overlook the matter of refunding fees incurred by personal calls or telegrams.

In the first instance, a good check may be had through the distribution process. At the close of each month, toll charges should be distributed from the telephone bill and telegraph fees should be distributed from copies of telegrams filed with the central telegraph agency; telegrams should be chargeable to the bank only upon the approval of some designated authority,

to whom a copy of each telegram is sent for filing. Toll charges and telegraph fees should then be submitted to the officer or department with whom they originated for a recheck for possible charge backs and for designation of personal items.

Postage. The use of metered postage practically obviates the necessity for auditing. Even in banks that make use of such equipment, however, the use of postage stamps cannot be completely obviated. The purchases of postage stamps should be controlled and stamps should be withdrawn from the central supply only upon written requisition, a copy of each requisition to go to the auditor. Practically, in order to insure his receiving a true copy in each case, his authentication should appear upon each requisition before it is honored. By the use of requisition copies the central postage agency should be required to make monthly proof of the postage account, balancing purchases against authorized withdrawals.

For checking the detailed use of postage, test checks of departmental requirements should be made from time to time.

Traveling. A check of expense vouchers supporting major items of traveling expenses lends some measure of protection. In the case of bank people actively engaged in traveling, a mileage basis seems desirable.

Lunches: officers' and employees'. Officers' lunch-expense tickets should be inspected in the light of the

bank's policy in connection with such matters. Employees' lunch tickets should be checked against time records and analyzed as to frequency. Often it will be found that the same group of people constantly do overtime work, requiring lunch allowance. Where this fact is developed, investigation should be made to determine whether the condition is due to inefficiency or overwork. In either event, any such abnormal condition should be adjusted.

Insurance. Aside from proving the validity of insurance expense by audit of disbursements against insurance bills, each bank should satisfy itself as to the following question: Does the insurance coverage carried give the bank the protection needed, and is the bank so insured that no unnecessary premiums are paid?

Most bankers know little of technical insurance details, and it would pay every bank to have its entire insurance situation examined at intervals by a first-rate insurance counselor.

Contributions. Contributions should be made only upon authentication by some senior bank officer who is charged with the responsibility for the bank's contributions. They should be made only by expense check drawn to the order of the beneficiary.

Taxes. Audit of taxes involves control of taxes. This is a considerable item of bank expense, and unless the bank has some one well versed in all types of tax

matters, bank taxes should be placed in the hands of reputable public accountants.

Advertising. The audit of advertising expenses involves the checking of authenticated bills against expense checks at the time of distribution. The audit function, as applied to the "usefulness" of the bank's advertising, is a much discussed question. Comment on bank advertising in general appears in a succeeding chapter.

Stationery and supplies. Stationery and supplies should be acquired only through requisition on the central purchasing agency. The purchase of such items should be through numbered purchase order forms, a copy to be filed with the supply manager, to be attached by him to invoices which he submits for payment. When expense checks have been issued, they are to be checked against purchase orders and invoices prior to delivery to venders.

A perpetual inventory of stock on hand, to be audited periodically, is a necessary adjunct to the control of such items.

THE FACTOR OF "USEFULNESS"

These suggestions as to audit treatment of the bank's expense account are, of course, very elementary and are susceptible to development in great detail. In each bank peculiar problems exist. It should be remembered that each item of expense should be examined

in the light of the two questions: Is it legitimate? Is it useful?

The average bank should have little difficulty in insuring the "legitimacy" of its expense items. The "usefulness" of certain expenditures, on the other hand, is a major bank problem.

As was brought out in chapter v, "Accounting for Activity," the bank may be wasteful of expenses even aside from the possibilities of waste in internal bank operations through a weak policy as to checking and collection privileges permitted depositors of certain classes. Or the officers of the bank may make unwise interest arrangements, often allowing interest not only to the customers who deserve interest consideration but to others who insistently demand it. The bank may be wasteful of expenses through a misapprehension on the part of the management as to what constitutes a proper banking service to be offered for the convenience of depositors. And the bank may be wasteful of expenses in some features of its advertising and business-extension program. Some examples of this lack of usefulness in bank expenses follow.

Checking and collection privileges. An extreme case of watchfulness over normal expenses, with absolute disregard for waste in checking and collection privileges — "straining at the gnat and swallowing the camel" — comes to mind. The internal operations of this bank fell under the supervision of a stern old banker who

watched every nickel entering the expense account, and in so far as his personal field of endeavor extended that bank had an efficient operation. The transit manager of that bank, an ambitious young fellow, had the rather disagreeable habit of running his little transit department all day and then thinking all evening about the many things he would like to see changed in the bank. Each morning he would try out his ideas on the banker, much to the latter's disgust.

The pet aversions of this transit manager were two of the bank's large accounts which, he claimed, were absorbing a considerable portion of the bank's profits through an overuse of collection services as reflected in his transit department and which, according to reports from the bookkeeping manager, were responsible for a great amount of work and trouble in that department, but he could convince no one as to the merit of that conviction. The bank's officers looked at these two balances, each well in excess of $100,000, and said, "You're crazy." Even though the bank had no plan under which costs of detailed operations were even approximately indicated, this young man clung to his idea and determined to find out something about costs in the banking business. He first wrote to several bankers asking their ideas on the subject, but received little information from this source. (This was in the year 1922.) Next he enlisted the aid of the bank's general bookkeeper, who kept such expense records as

the bank maintained, and was thus enabled to begin a study of bank expenses. He asked for the temporary services of a man to help him pursue the investigation, but the request was refused as a needless bank expense. So it devolved upon him and upon the general bookkeeper to spend their evenings studying expenses and activity, each paying for his own dinner due to the unwillingness of the aforementioned hard-headed banker to have the bank's money spent needlessly.

As a final result these two men, after wrestling with items of space distribution and rent, stationery, postage, furniture and fixture expense, and administration, evolved a crude set of bank costs which they applied to the two accounts, with results that astounded even them. They rechecked all of their figures, but those accounts could not be made to show up in any light other than as distinctly costly, the loss to the bank amounting to thousands of dollars a year.

Then followed the job of selling the facts to the bank executives, who finally took action to end the loss and realize a profit from each account, which they were able to do, retaining both accounts.

The moral in this homely story of youthful initiative does not lie necessarily in the need for bank-cost analysis—most bankers recognize the necessity for that facility today; rather, it lies in the thought that the banking business is undergoing a constant change, and if today's banker is to keep up with the procession

he must train his mind to contemplate the possibilities of profit and loss in all phases of his business, not merely in the obvious day-to-day transactions which cross his desk. As fast as this business is changing, bank costs cannot be controlled in that way.

Interest paid on deposits. The bank can afford to pay interest to depositors on certain types of deposits, but it frequently does pay on deposits, particularly checking accounts, which deserve no interest. The inclination of the banker to secure increased deposits is so strong that oftentimes his desire for the new account overcomes his better judgment to the point that he goes after the deposit armed with interest attractions. This practice has been so prevalent in the past that many banks are loaded with costly interest accounts at the price of reduced profits. This natural tendency has been recognized in at least two middle western cities to the point that efforts have been made through Clearing House action to end unwise interest arrangements on commercial checking accounts for all time. The following is a transcript of a penalty regulation made effective by the Kansas City Clearing House Association early in 1931:

INTEREST RULE

No member of this Association and no bank, banker, or trust company clearing through a member, shall agree to pay, or pay, directly or indirectly, interest on any balance of an individual, firm, or corporation carried in an account subject to check, in excess of the rate hereinafter fixed and only after the amount upon which interest may be paid has been determined as follows:

From the average daily ledger balance for the interest period there shall be deducted the average daily amount of items deposited for credit for the time they are outstanding in process of collection; if after such deduction the average daily net collected balance is less than One Thousand Dollars ($1,000), no interest shall be paid; if the average daily net collected balance is One Thousand Dollars ($1,000) or more, the rate shall not be in excess of ... per cent[1]+(. %) per annum; provided, that before the payment of interest every account shall be analyzed for the interest period according to the formula adopted by this Association; if such analysis indicates that the payment of interest computed in accordance with this rule will cause a loss to the bank, the amount of such loss shall be deducted from the interest payment.

ANALYSIS FORMULA

CREDIT

Earnings per month (after deduction for reserves and expenses, other than departmental costs) on each $1,000 of net balance ....$2 75[2]

DEBIT

Departmental costs

Account maintenance cost (monthly)	$0.50
Each check paid and each deposit credited	.03
Checks deposited, each	.01
Collections made (city or country), each	.25
Coupons collected (other than U. S. government), each (Maximum of 25¢ for a bunch of coupons of same maker and maturity.)	.05
Special services rendered, according to nature of same	

Proper banking services. It would be quite foolhardy to attempt to set forth regulations as to what constitutes proper banking services; at best, such a statement would represent purely one individual's idea on the subject. Many banks have acquired the practice of encouraging the customer to bring into the bank, for

[1]Rate established from time to time by Clearing House action.

[2]Rate established from time to time by Clearing House action. The rate shown is calculated according to the following formula: $1,000 less 11 per cent (reserve) equals $890. $890 at 4 per cent equals $35.60 (annual income). $35.60 less $2.40 (conversion cost of $0.20 per $1,000 per month) equals $33.20 per year, or about $2.75 per $1,000 per month.

help and solution, everyday problems that are so far removed from the banking business that the services extended appear ridiculous.

There is the matter of income taxes and other forms of tax returns. A large number of banks look after these matters for customers, offering the service as a set feature of the bank's service program. Aside from the fact that the bank generally cannot afford the services of a tax expert for this purpose and is thus unable to render a real worth-while service, the practice is to be condemned as unfair to the bank's good accounting customers who make their living from selling their accounting services.

The same seems true of banks that offer free legal service, draw wills, and so forth. Generally a real worth-while service is not rendered; it is costly to the bank; the service is not equitably distributed among the bank's customers, and the bank is encroaching to an unwarranted degree upon professional services offered by members of the professions. This does not mean that the bank's lawyer or the bank's accountant should not be available to advise with a customer on a technical question; quite the contrary, it means that he will be available for that purpose should real need and the opportunity for a real worth-while service arise.

It is not necessary to detail the many avenues of wasteful and otherwise unwise services into which banks have steered themselves, competitively. Suffice

it to say that all such services should be coldly analyzed and only those retained which have a worth-while value to the customer in service and to the bank in the promotion of good will and friendship.

Advertising and business-extension expense. In fairness to men in the advertising profession, it must be said that the trained bank publicity manager is inclined to exact value received for the money he spends. On the other hand, banks seem inclined to spend liberally for publicity and business-extension purposes without really counting the cost. The job of the publicity manager is largely that of intelligently and effectively placing in the minds of the public the services and facilities maintained by the bank for the profit and convenience of its customers so that the bank may accomplish the twofold purpose of cementing its relationship with existing customers and increasing their numbers. Whether or not the bank maintains a publicity department, some one in the bank undertakes the job of publicity and business extension or else the bank employs counsel to carry on that mission.

So, again, the question of management arises. If the publicity man is instructed to push profitable lines, or solicit prospective customers with profit potentialities, then the operation is a successful one. If the management has the publicity directed toward fields which by their very nature are bound to be unprofitable, then the process is a costly one.

One example of this proposition of wastefulness in advertising and business extension should be sufficient to demonstrate the point. Do you remember that great country-wide campaign, perhaps reaching its height in 1919–1921, "Pay your bills by check"? From the standpoint of pure publicity, that campaign was a howling success; from the standpoint of profitable banking business it was a most dismal failure. Banking (checking) departments entered competition with their own savings departments, and millions of costly checking accounts were initiated. Profitable savings accounts were, in many instances, transformed into unprofitable checking accounts, and in the opinion of many people it is the result attained from that particular type of business promotion that now makes it absolutely essential that the bank protect itself through service charges on small bank accounts. This is an example of effective advertising misdirected. Many bank managers failed to realize that some people cannot afford the luxury of a bank checking account which, after all, is largely a matter of convenience. The bank can best serve this class of people through its savings department, where returns to customers for maintenance of deposits are largely in interest rather than in banking services.

Little has been said here as to the audit of expenses for validity. That is a relatively simple task and one which most banks are prepared adequately to perform.

Considerable has been said about the audit of expenses for usefulness; that is a really difficult task and is of vital concern to the banker. For, after all, aside from the bank's moral obligation to protect its family, is it not just as necessary that protection be had against waste and misconceived expenditures as against expenditures dishonestly made? Is not one dollar of profit worth just as much as another?

CHAPTER XI

AUDITING NON-BALANCE-SHEET ITEMS

THERE are certain values involved in the operation of every bank that are not reflected in the bank's balance sheet, and as a consequence these values frequently receive scant attention. There is a real element of danger to the bank in such items, and unless they are strongly controlled they are likely to be a source of trouble sooner or later, some of the largest of bank defalcations during recent years having been based upon manipulations of these items. The major items of this character are as follows:

1. The bank's liability for collection items held for the accounts of others
2. The bank's liability for securities held in safekeeping for customers
3. The bank's liability for securities left by customers for sale or exchange
4. The bank's contingent liability for surety bonds signed for customers
5. The bank's charged-off assets

Upon analysis of the nature of these items, it will be readily appreciated that any audit protection with which they are surrounded must of necessity be in the nature of a control; that is, it is difficult to audit unknown liabilities, and the main purpose of the audit

is to insure a proper reflection of these liabilities in the bank's records. Some suggestions leading to the audit control of items of these classes follow.

Collections held for accounts of others. This is one of the commonest of all bank transactions, and yet there is scarcely a sizable bank which has not had an embarrassing experience growing out of or at least concealed by manipulations of collections made for the accounts of others. The control of this item is really quite difficult.

The first element of safety lies in a segregation of collections of this nature from collections carried in the bank's cash account, the object being to make a conversion of collection proceeds more difficult and to provide a means for checking the proceeds of each collection item back to the owner, whenever such a detailed check seems desirable.

It is important that every incoming collection be promptly entered in the bank's records, and that an appropriate collection number be assigned thereto. It is important also that the record be made by some one other than the person (or group of persons) who presents the items and converts them into cash or the equivalent of cash. After the original record has been made and each item identified in the record by number, it then becomes a matter of detailed audit to insure that each numbered item is accounted for to the owner. This audit should encompass all of the features suggested

in a previous chapter for the audit of other forms of bank liability.

There is one additional protective feature that many banks have invoked: "tracers" and similar letters of inquiry are placed in the hands of a designated individual (the auditor) for investigation and reply; they do not go to the department or person to whom the original transaction was assigned. Through this means, any failure to account to the owner promptly may be detected and an investigation of such delays may lead to information of a vital character.

Safekeeping securities. A bank customer is inclined to use little caution in dealing with his banker and often will accept almost any kind of receipt in return for securities left with the bank for safekeeping. The plan of audit control over such items must have its beginning in the acceptance of the securities and must safeguard them through to the point that the customer acknowledges their return. Control over such items, then, is almost entirely a matter of system.

The bank's management should order that safekeeping securities be accepted only by a designated individual and that receipt therefor be issued only on a designated, numbered form, requiring both a signature and a counter signature. The order should provide a stringent penalty for the slightest deviation from these provisions. The supply of numbered receipt forms should be under the joint control of the two

signing individuals, and the issuing individual should be required to account for each receipt form.

The receipt form should be in at least three counterparts, or more if the system so requires—an original to go to the depositor; a second copy to constitute the customer's account in the safekeeping ledger, and a third copy to constitute the vault record. Securities should be filed in a dual combination safe by the two responsible individuals and should be released only upon return of the original receipt, properly endorsed, the endorsement to be approved both by the issuing individual and by the one who joins in the dual custody. Partial withdrawals should be accompanied by cancellation of the old receipt and the issuance of a new one.

In banks of sufficient size to justify a vault custodian, it is he who acts as the second man in the transaction; in smaller banks, some other reliable individual should be designated. *The success of the audit control depends almost entirely upon the rigidity with which the system is enforced.*

Securities left for sale or exchange. Aside from serving as custodian of securities for such customers as may desire to file their securities for safekeeping, the bank is called upon to handle other security transactions for its customers—purchases, sales, and exchanges. Because of this relationship with its customers, the bank has in its hands, for temporary periods, large values which do not show in its balance sheet.

It is very important that these values be safeguarded. Protective features must be set up to prevent the creation of a "floating difference" similar to that sometimes operated by a receiving teller when he withholds deposits one day and puts them back the following day, other deposits being then withheld to cover his shortage.

Just as in the case of safekeeping securities, it is of vital importance that all incoming items be recorded, and here again some individual must be designated to receive the securities and issue a receipt on an appropriate numbered form, which must be countersigned by another designated person.

In this case the securities are not to be deposited in the vault; rather, after the record has been made, they are to be placed in the hands of the proper person to be sold, exchanged, or transferred. The record of receipts outstanding must be followed to the point that each owner of securities returns his receipt, having endorsed thereon the fact that a satisfactory accounting has been made. Needless to say, receipts of this character should be non-negotiable and non-transferable. As in the case of safekeeping securities, the success of the audit control depends upon the rigidity with which the system is enforced.

Surety bonds. Some banks continue to make a practice of signing surety or guaranty bonds for certain preferred customers. Usually, such bonds are in

connection with suits at law instituted by customers at points remote from their own community, or they may be guarantees to the post office covering the acceptance of checks and various other matters.

The difficult task in such circumstances is that of insuring the maintenance of a correct record of such liability. In banks where this practice exists, it is essential that some one person be designated to sign such documents as may be approved by the management, that person to make a complete record of each transaction, together with the maximum liability thereunder. From time to time these liability items should be checked, both with those holding the guarantees and with those at whose request they were issued, and all of those which may be recovered should be destroyed and the records corrected.

Charged-off assets. Notes, securities, checks, and other items charged off frequently have considerable recovery potentialities. Every effort should be exerted toward safeguarding the values represented by such items and insuring an accounting to the bank for all recoveries effected.

There seems to be no fool-proof auditing method to assure this desirable result, as each bank is faced with its own particular problem. There are a few precautions, however, that every bank should take in connection with charged-off assets, and these do supply some measure of protection.

As a matter of principle, officers who originate transactions (make loans, buy securities, cash checks) resulting in charge-off should not be permitted to handle charged-off assets. Some other person in the bank should be selected to receive and handle the charged-off items.

Upon charge-off, items should be transmitted to the person as designated, by memorandum, a copy to go to the auditor, who should check the items in to the "charged-off asset ledger" and see that the memorandum control over all items of this character is duly affected by the new items. A control account supported by detailed ledger records is a necessary part of the plan.

As collections are affected, entry should be made both in the ledger accounts and in the control. Each month a list of recoveries should be made and attached to the bank's monthly operations report. A suggested form to be followed in making this section of the report is as follows:

Name of Charge-off Account	Original Charge-off	Previous Recoveries	This Month's Recovery	Uncovered Balance
John Jackson	$800.00	50	20	$730.00
Tim Brown	40.00	0	10	30.00
T. J. Roberts ..	321.50	120	30	171.50

This report should be freely circulated among the bank's officers for inspection. Even though the handling of an item after charge-off has been taken out of the hands of an officer, still he is interested in that item

and it is probable that he will know of any substantial recovery that has been made. If he does know of such recovery, and if it does not appear in the list, then questions are asked, this being the object of the audit.

Once each year charged-off items should be thoroughly reviewed and those which unquestionably are dead should be removed from the control and from the ledger. Then a complete report of all remaining items should be made, showing original charge-off, recoveries, balance, and any other pertinent information that may be available. This report should be carefully reviewed by the bank's officers and studied in the light of their knowledge of the conditions of the various debtors.

Through some such means the bank must get its protection. Audit by direct verification is not possible, since few debtors will acknowledge the indebtedness even if they can be reached.

The large bank defalcations generally occur in connection with non-balance-sheet items. During 1930 and 1931 some startling defalcations in large banks came to light—almost without exception involving securities or other values belonging not to the bank itself but to its customers. Then, in numerous small banks, the misuse of customers' securities has been the foundation upon which many defalcations have been created during recent years. While it seems unbelievable, yet it is true that in some communities the people have seen their trust violated so frequently, on the part

of their bankers, that such occurrences now appeal to them as being almost commonplace.

While losses of staggering amounts have been sustained by large banks in recent years, arising from values carried by the bank but belonging to bank customers, and while every bank, both large and small, is faced with an ever-present danger in connection with such items, yet an analysis of the matter will show that it is the small bank, the country bank, that most frequently is affected. And it is the country bank that suffers most from such an occurrence. Frequently fidelity insurance coverage is inadequate, and even when adequate it is difficult to convince the public that such was the case. Under such circumstances, people in rural communities, seemingly, are inclined to question the soundness of remaining bank values to an extent not experienced by banks in the larger centers.

There seems to be a definite and peculiar reason for this extended bad experience on the part of country banks, arising from manipulation of customers' values by bank officers. In such communities "the banker is the bank." Over a long course of years customers have trusted their bankers with their most prized possessions, and it rarely occurs to them to ask an accounting. Both the customer and the banker eventually grow to look upon such transactions as personal—to the customer the banker is the bank, and to the banker the bank has little place in the transaction. In

reality the banking business in rural communities has probably been built on just that basis, the personal basis, and it is very natural that the personal element should be uppermost in the mind of both customer and banker.

This situation has brought about some very sad cases, where the banker has forgotten and / or betrayed the position of trust he occupied. The frequency of these cases, particularly since the period of declining market values of securities and commodities has been entered, is appalling.

The bank is responsible for the acts of its officers with relation to bank customers, and even the most remote inland bank has this problem of audit control. In the cases of country banks, particularly, there probably are no banking transactions which deserve and demand an equal amount of thought and attention along the line of protection. Bank directors may well take cognizance of this fact. They may operate a stable bank for thirty years and then lose the confidence of their customers overnight through just one such misfortune.

The solution of the problem of safeguarding customers' values entrusted to the bank for collection, safekeeping, sale, or exchange, in the country bank, lies largely in the changing of the idea held by some country bankers that such transactions are personal ones. They are not. Since the bank is responsible for his acts, the

banker has not the privilege of conducting these transactions on a personal basis. Make them a routine part of the bank operation and provide facilities for handling them. The wise banker will no longer accept this responsibility singly. Wherever a banking force consists of two or more people, protection may be provided. The method of protection has hereinbefore been discussed—numbered receipts requiring dual signature, dual custody (a second lock to fit over the present combination lock may be purchased for a few dollars), and ironclad rules providing for delivery only upon proper receipt, dually authenticated, lead to protection. In the large bank and in the small the formula is the same, and in both the danger is ever present.

In closing the series of chapters on the subject of bank auditing, attention again is directed to the principle set forth at the beginning of the series, the essence of which is as follows.

Audit protection in a bank is not a one-man job, even in the small bank. It is a matter of forethought and of common-sense safeguards thrown over the whole operation. A bank must be definitely and firmly administered if even a small measure of protection is to be attained. Automatic audit features must be worked into the operating systems and single individual responsibility must be avoided; advantage must be taken of the right vested in executives arbitrarily and suddenly to reassign duties in order that every man's operations

may be tested by others, and finally, some person or group of persons must carry the responsibility of following all of these things and of keeping them continually operative, adding a fair measure of direct check and verification to finish out the whole.

These things will not preclude an occasional unfortunate incident—there is no way to prevent a man from stealing in a bank—but these things will make defalcations more difficult and they will aid in prompt detection. It is a notable fact that the tendency of men to steal becomes less positive as the possibility of quick detection and punishment tends toward certainty.

CHAPTER XII

REPORTS OF BANK OPERATIONS

WHEN a business enterprise grows to the point that it is no longer a one-man business, that is, when it reaches the point that one man is unable to follow all of its transactions and, from his own personal knowledge, measure the one transaction against the other and determine the true effect of each, then the need for operating reports begins. In a business just emerging from the one-man stage the reports required are of a very simple nature, their mission being primarily to guard against forgetfulness and to provide information to others who may be interested in the business. As the size of the business enterprise grows, the report requirement grows; the data must be assembled in a more complete form; the study of the data must be more searching, and the completed report must be more enlightening.

Consider now the large business enterprise, the business encompassing numerous operations and transactions and requiring the services of a number of people. It is necessary that in some manner or other the complex transactions which occur in great numbers, originated by many individuals, be translated into the equivalent of the one-man business, in order that some one man, the chief executive, may find himself

possessed of the information he needs to operate the business successfully. This need for the translation of a multitude of detailed transactions into a limited number of revealing statements and figures is answered by operating reports. *Operating reports are essential to the management of a banking business, large or small.*

This chapter deals with the nature and types of operating reports merely in a general way, a succeeding chapter being devoted to the preparation of material and the formulation of the report. There are three distinct phases to the preparation of an operating report.

1. An analysis of the operations and conditions to be covered by the report
2. A study and interpretation of the facts and figures developed in the analysis
3. The writing of the report

Each of these steps requires painstaking work and careful consideration. We shall consider first the analysis.

Analysis. This involves the detailed development of all facts and figures that have any bearing on the subject matter of the report. It is, in short, the job of fact finding, the job of breaking down general conditions and total figures into specific and detailed material. To a large extent the degree of the utility of the completed report is measured by the care and the exactitude with which this work is done. When all

available material has been assembled, the second step may be taken.

Interpretation. This involves a careful study of the facts and figures developed by the analysis. It is, in short, the job of weighing and measuring. To throw all of the material together and present it is not sufficient; it must be arranged in some logical sequence which will bring out the true story as to what happened and why it happened. The facts developed by the analysis must be given their proper relative values, and these values must be weighed one against the other. This job of study and interpretation is ended only when definite, supportable conclusions have been reached. The material is then ready to be placed in report form.

Writing the report. In a concise and faithfully accurate manner the facts, the interpretation, and the conclusions are to be set down in written form for delivery to the person or persons for whom the report is intended. The arrangement should be logical; the comment should be definite and in plain words. Basic facts should be set out early in the report; the final result should appear in the first paragraph of the first page and should be followed immediately by a succinct discussion of the primary conditions which produced that result. In succeeding pages further details may be given, all in support and corroboration of the statements made early in the report.

General operating figures bearing directly on the final results set forth in the comments are attached to the report as "Exhibits." Details of items appearing in the Exhibits are carried in supporting "Schedules." Extraneous facts and figures which throw further light upon any phase of the situation may be attached as "Appendices." Thus, in a logical and easily understandable manner, the situation is developed and a busy executive may direct his entire attention to the conditions as they actually exist, without the necessity for making a study of all the material to determine what conditions do exist.

WHAT CONSTITUTES A GOOD OPERATING REPORT

A report is a good report if it enables an executive quickly to grasp the idea of the writer in full, to understand the underlying data from which the writer's conclusions were drawn, and to review the conclusions in the light of his own broader knowledge of general conditions, without a question as to the accuracy and completeness of the information used. Any report or any assembly of figures that does not bear these characteristics is not a good report and is not worthy of delivery to an executive. While this may seem a harsh conclusion, still it must be remembered that any assembly of data which leads to a false conclusion, or any assembly of data which is incomplete to the point that

no definite conclusion is possible, is worse than useless; it not only represents a waste of time but also it may create an erroneous impression that, even if not acted upon, still remains in the mind to make an appreciation of the true idea most difficult.

To the experienced eye the report itself generally indicates the degree of care that has gone into its making.

TYPES OF OPERATING REPORTS

Any assembly of facts and figures pertaining to the bank's operations put up in report form constitutes an operating report. It is evident, therefore, that operating reports may take many forms. They may be divided roughly into the following classes: (1) profit-and-loss reports, (2) statistical reports, and (3) cost reports.

While it is difficult to make a clean-cut differentiation between reports of the three classes, since each may be expected to bear some of the characteristics of the others, yet they may be described in general terms as follows.

Profit-and-loss reports. Each month, each quarter, and each year, or at any other regular intervals, the management desires information on results for the respective periods.

A monthly profit-and-loss report may be very brief, consisting simply of a statement of income, expense,

and net earnings by departments, a reconciliation of the undivided profits account, and a detailed list of items charged off and recovered. Comments may be omitted. To be of maximum value, the statement of income, expense, and net earnings should include four columns, headed "This Month," "This Month Last Year," "So Far This Year," and "So Far Last Year." A suggested form for this main sheet is shown in Fig. 11.

A quarterly profit-and-loss report should be more complete, and in addition to showing what happened it should show how it happened. It should include some statistical data and should provide the necessary information to enable the management to review the trends of the business and to amend bank policies where necessary. This report should include comment as to conditions prevailing in the business and as to comparisons in income, expense, net earnings, deposit levels, loan and investment levels, and like indicative items this quarter as compared with the same quarter last year and two years ago.

A very necessary feature of the quarterly report is the average balance sheet for the quarter, since it is against quarterly averages that income and expense items are compared and rates and ratios are determined. Figure 12 is the index to the suggested quarterly report, showing the principal classifications which may well be included. A complete quarterly report, built up along

the lines just discussed, is included in a subsequent chapter.

FIG. 11. "A" BANK AND TRUST COMPANY

INCOME, EXPENSES, NET EARNINGS, AND NET PROFIT OR LOSS FOR THE MONTH OF APRIL, 1933

ITEMS	THIS MONTH APRIL 1933	THIS MONTH LAST YEAR APRIL 1932	SO FAR THIS YEAR	SO FAR LAST YEAR
INCOME:				
Banking Department:				
Operations..	$0,000	$0,000	$00,000	$00,000
Recoveries on items previously charged off	00	00	000	000
	$0,000	$0,000	$00,000	$00,000
Bond Department.........	000	000	0,000	0,000
Building Department..........	000	000	0,000	0,000
Trust Department....	000	000	0,000	0,000
Total income.................	$00,000	$00,000	$000,000	$000,000
EXPENSES (exclusive of administrative expenses):				
Banking Department:				
Interest paid	$ 000	$ 000	$ 0,000	$ 0,000
Other expenses.....	000	000	0,000	0,000
Losses charged off.........	00	00	00	00
	$0,000	$0,000	$00,000	$00,000
Bond Department........	000	000	0,000	0,000
Building Department	000	000	0,000	0,000
Trust Department................	000	000	0,000	0,000
Total expenses...............	$00,000	$00,000	$000,000	$000,000
DEPARTMENTAL EARNINGS:				
Banking Department............	$0,000	$0,000	$00,000	$00,000
Bond Department.............	000	000	0,000	0,000
Building Department............	000	000	0,000	0,000
Trust Department..............	000	000	0,000	0,000
Total departmental earnings.....	$0,000	$0,000	$00,000	$00,000
Deduct:				
General administrative expenses..	$ 000	$ 000	$ 0,000	$ 0,000
Reserve for taxes	00	00	000	000
Total deductions	$ 000	$ 000	$ 0,000	$ 0,000
Net profit....................	$0,000	$0,000	$00,000	$00,000

FIG. 12. "A" BANK AND TRUST COMPANY
INDEX OF QUARTERLY REPORT OF OPERATIONS,
FIRST QUARTER ENDED MARCH 31, 1933

An annual profit-and-loss report may be formulated by combining the four quarterly reports and adding certain further data of a statistical nature. At the end of each year the bank's entire situation should be reviewed and the operations of each department should be thoroughly discussed, through the medium of the

annual report. All operating information which it is desirable to preserve for future reference and comparison should be included in the annual report.

To sum up the subject of profit-and-loss reports, it may be said that the monthly report shows quickly "what happened"; the quarterly report shows "what happened" and "how it happened," becoming therefore the bank's "policy reviewing report"; and the annual report shows all of the data included in the four quarterlies plus such other information as may be assembled to throw light on the annual operating result and may be desirable for future comparison.

Statistical reports. Statistical reports generally are designed to provide information on particular phases of bank operations or conditions and often deal with single elements which go into the making of profit-and-loss and cost reports.

Analyses of activity, deposit account levels, loans and discounts, securities, and all similar items, when put in report form, fall under the classification of statistical reports. Comparisons of operations and banking conditions between years are typical of reports of this type. Figure 13—an example of a statistical report—shows the net operating results of a bank for a ten-year period.

Cost reports. Cost data are secured through the application of bank activity to bank expenses. To be of real value to the management, costs must be presented in a usable fashion, and the presentation of

FIG. 13. "A" BANK AND TRUST COMPANY

EARNINGS ANALYSIS FOR THE TEN-YEAR PERIOD 1923 TO 1932, INCLUSIVE

YEAR	INCOME	EXPENSE	NET EARNINGS	LOSSES	RECOVERIES	NET CHARGE-OFF	BALANCE BEFORE DIVIDENDS
1932	$ 769,655.39	$ 576,644.52	$ 193,010.87	$ 40,131.20	$ 9,352.80	$ 30,778.40	$ 162,232.47
1931	763,349.66	586,732.22	176,617.44	36,642.54	6,249.91	30,392.63	146,224.81
1930	762,917.74	574,377.88	188,539.86	67,762.16	12,488.96	55,273.20	133,266.66
1929	788,208.76	587,187.46	201,021.30	53,172.65	3,419.90	49,752.75	151,268.55
1928	795,349.49	595,850.90	199,498.59	89,023.39	10,064.91	78,958.48	120,540.11
1927	701,414.14	579,798.67	121,615.47	47,927.80	5,346.14	42,581.66	79,033.81
1926	759,910.77	589,868.76	170,042.01	38,910.70	14,265.36	24,645.34	145,396.67
1925	718,915.47	573,250.22	145,665.25	60,015.15	17,950.50	42,064.65	103,600.60
1924	771,242.54	580,101.21	191,141.33	134,130.93	23,641.84	110,489.09	80,652.24
1923	720,125.98	569,459.44	150,666.54	49,714.21	8,436.33	41,277.88	109,388.66
Total	$7,551,089.94	$5,813,271.28	$1,737,818.66	$617,430.73	$111,216.65	$506,214.08	$1,231,604.58

RECAPITULATION

Earnings after expenses (10 years)	$1,737,818.66
Deduct: Net losses	506,214.08
Balance before dividends	$1,231,604.58
Deduct: Dividends (8 per cent per annum)	800,000.00
Net additions to profits	$ 431,604.58

cost data represents one of the high points in report making. Too often, in both the banking business and business of other classes, the cost reports consist of great masses of figures put together in a hurried way, and their full utility is therefore never fully realized. In a succeeding series of chapters devoted to analysis, this subject of cost reports will be discussed further.

FOR THE SMALL BANK

While almost every sizable bank, being departmentalized, provides some system of operating reports, it frequently happens that the banks of smaller totals do not make use of this valuable tool of management. To follow bank operations intimately, such reports are necessary and it always is important that they carry comparative data. For the purely commercial bank, under say $3,000,000 in resources, a very simple operating report prepared on a monthly basis and carrying comparative features is suggested; Fig. 14 is included here to demonstrate the method suggested. There may be attached to this report, which is expected to serve the combined purposes of monthly, quarterly, and annual operating statements, another sheet showing details of items charged off and recovered and details of the charges and credits to the undivided profits account, if such information is desired.

The job of preparing the material and presenting to managing officers the essence of what is occurring in

FIG. 14. "A" BANK AND TRUST COMPANY

INCOME, EXPENSES, AND NET EARNINGS FOR THE MONTH OF APRIL, 1933

	APRIL 1933	APRIL 1932	SO FAR THIS YEAR	SO FAR LAST YEAR
INCOME:				
Interest from loans and discounts	$ 0,000	$ 0,000	$00,000	$00,000
Interest from bonds and securities	0,000	0,000	00,000	00,000
Interest from bank balances	000	000	0,000	0,000
Commissions received	00	00	000	000
Service and returned item charges	000	000	0,000	0,000
Exchange	00	00	000	000
Miscellaneous income	00	00	000	000
Total income	$00,000	$00,000	$00,000	$00,000
EXPENSES:				
Interest paid on demand deposits	$ 000	$ 000	$ 0,000	$ 0,000
Interest paid on savings deposits	0,000	0,000	00,000	00,000
Interest paid on certificates of deposit	000	000	0,000	0,000
Premiums on depository bonds	00	00	000	000
Officers' salaries	000	000	0,000	0,000
Employees' wages	0,000	0,000	0,000	0,000
Rent, light, heat, water, janitor service	000	000	0,000	0,000
Machinery and equipment	00	00	000	000
Stationery and supplies	000	000	000	000
Telephone and telegraph	00	00	000	000
Postage	00	00	000	000
Insurance	000	000	000	000
Taxes	000	000	0,000	0,000
Contributions	00	00	000	000
Directors' fees	00	00	000	000
Miscellaneous	000	000	0,000	0,000
Total expenses	$00,000	$00,000	$00,000	$00,000
Net income	$ 0,000	$ 0,000	$00,000	$00,000
Deduct:				
Net losses	000	000	0,000	0,000
Net earnings	$ 0,000	$ 0,000	$00,000	$00,000

ANALYSIS OF FUNDS

Demand deposits (month's average)	$000,000		
Time deposits (month's average)	000,000		
		$0,000,000	
Less: average reserve required		000,000	
			$0,000,000
Capital, surplus, and undivided profits (month's average)			000,000
Average available funds			$0,000,000

	Amount	Per Cent of Available Funds
Interest income	$0,000	0.00
Other income	000	.00
Total	$0,000	0.00
Interest expense	$0,000	0.00
Other expense	0,000	0.00
Total	$0,000	0.00
Net earning	$0,000	0.00

the business is a real job and one that deserves much thought and actual study in every bank. Invariably, the well-informed bank is the successful bank, and it is difficult to place too much stress upon the necessity for an accurate and an adequate reporting system.

CHAPTER XIII

THE QUARTERLY OPERATING REPORT

IT IS proposed to show in this chapter a complete quarterly report of bank operations. It is to be considered that all of the material has been analyzed and studied to the point that he who makes the report has a good working knowledge of just what has happened.

In most banks the analysis of income and expense is a daily process, being accomplished through a system of income and expense distribution. The distribution records are set up in sufficient detail to provide a complete "breakdown" of income and expense, both by classes of items and by operating departments and divisions of departments. The requirements as to the scope of these records vary in different banks, not so much with the size of the bank as with the lines of banking business conducted. Thus while distribution records may be similar in two banks conducting a purely commercial banking business, even though the one has resources of only $3,000,000, as compared with the other's $30,000,000, if a series of special banking services, such as a Bond Department, Safe Deposit Department, and Trust Department be added to the one, its distribution requirements become more complex and its records must be more elaborate.

The bank to be reported on for the quarter is a theoretical bank. It is not the purpose to make this an ideal bank; rather it is intended that this be an average bank, one that has both the strong points and the weak points of an average bank.

THE BANK

The name of this bank is "A" Bank and Trust Company. It conducts a commercial banking business and maintains a Bond Department and a Trust Department. Its safe-deposit vaults are operated under a separate corporation. It owns the building in which it is housed, rents out some space, and operates the building as a department of the bank. It is a member of the Federal Reserve system.

The quarterly report is to cover the first quarter of 1933, ended March 31, 1933. On March 25, 1933, the bank published the following statement:

RESOURCES:		
Cash and due from banks	$5,650,534.21	
U. S. government securities	2,309,331.48	
Call and demand loans	390,540.25	
		$ 8,350,405.94
Bonds and securities		2,006,642.00
Loans and discounts		7,735,514.11
Bank premises and other real estate owned		511,000.00
Customers' liability account, letters of credit		21,006.28
Interest earned, not collected		51,433.99
Other resources		7,962.32
Total resources		$18,683,964.64

LIABILITIES:

Deposits: Time	$ 3,008,661.40	
Demand	13,927,729.18	
		$16,936,390.58
Capital: Capital stock	$ 1,000,000.00	
Surplus	400,000.00	
Undivided profits	278,416.23	
		1,678,416.23
Accrued interest, taxes, and expenses		44,311.16
Our liability account, letters of credit		21,006.28
Other liabilities		3,840.39
Total liabilities		$18,683,964.64

THE REPORT

April 5, 1933.

Mr. Banker, President,
"A" Bank and Trust Company,
Anywhere.

Sir:

The accounts of "A" Bank and Trust Company, reflecting the receipts and disbursements of the various departments, have been examined for the first quarter ended March 31, 1933. The results of the operations for the quarter, together with brief comment as to how they came about, appear in this and following pages and in the Exhibits and Schedules attached.

RESULTS FROM OPERATIONS

The operations for the quarter resulted in a net profit of $39,229.74. The departmental operations are summarized in a consolidated statement of income, expense, net earnings, and net profit marked Exhibit A. The following figures, taken from Exhibit A, are of interest:

	First Quarter Ended March 31, 1933		(For comparison) Fourth Quarter Ended December 31, 1932	
Income		$190,857.47		$196,239.80
Expense		143,165.09		150,023.13
Net earnings		$ 47,692.38		$ 46,216.67
Deduct:				
Losses	$10,511.48		$8,319.66	
Less recoveries	2,048.84	8,462.64	4,057.12	4,262.54
Net profit		$ 39,229.74		$ 41,954.13

The income, expenses, net earnings, and net profit for the first quarter of 1933, compared with the first quarters of 1932 and 1931, are shown in Exhibit B. The details of the income, expenses, and net earnings of the various departments are shown in Schedules I to IV, and a consolidated statement of expenses by departments appears in Schedule V. Analysis of notes and items charged off and recovered appears in Schedule X.

Exhibit C is a reconciliation of the undivided profits account for the quarter; Exhibit D is the bank's average balance sheet for the quarter, and Exhibit E is the balance sheet of the Trust Department on March 31, 1933. Other supporting Schedules, attached, are as follows:

Schedule VI —Analysis of cash, reserves, and float
Schedule VII —Analysis of bonds and securities and interest received

Schedule VIII—Analysis of loans and discounts and interest received
Schedule IX —Analysis of deposits and interest paid
Schedule X —Notes and items charged off and recovered

The following comments are intended to bring out the "high lights" of the operations of the various departments.

COMMERCIAL BANKING DEPARTMENT

The operations of the Commercial Banking Department resulted in a net departmental earning of $48,777.50 for the quarter, as follows (see Schedule I):

INCOME:			
Returns from employment of funds		$148,969.99	
Trading income (service charges, exchange, etc.)		3,553.75	
			$152,523.74
EXPENSES:			
Interest paid		$64,255.03	
Operating expenses:			
Salaries and wages	$21,484.69		
All other	9,543.88		
		31,028.57	
			95,283.60
			$ 57,240.14
Net losses			8,462.64
Net departmental earnings			$ 48,777.50

The funds at the disposal of the bank, averaged for the quarter, amounted to $18,437,000.00. They were derived from sources as follows:

The bank's own capital, surplus, undivided profits, and reserves	$ 1,719,000.00
Deposits	16,658,000.00
Borrowed money	—0—
Other miscellaneous items	60,000.00
	$18,437,000.00

The funds were employed by the bank as follows:

Cash, checks, collection accounts, and due from banks	$ 5,620,000.00
Loans and discounts	7,835,000.00
Securities	4,387,000.00
Real estate	524,000.00
Other miscellaneous items	71,000.00
	$18,437,000.00

A brief discussion of results obtained from fund employment follows:

CASH AND EXCHANGE (see Schedule VI)

Cash and exchange amounted to $5,620,000.00, or 30 per cent of total resources. It was made up of items as follows:

Cash and its equivalent (checks for clearance)	$ 495,000.00
Collection accounts	1,176,000.00
Reserve account at the Federal Reserve Bank	1,015,000.00
Deposited with other banks	2,934,000.00
	$5,620,000.00

Cash, reserve, and collection accounts made up $2,686,000.00 of the $5,620,000.00 total. These funds were non-earning.

Bank balances accounted for the remaining $2,934,000.00 of the total. These balances earned $7,481.70, or, at the rate of .0102.

LOANS AND DISCOUNTS (see Schedule VIII)

Loans and discounts totaled $7,835,000.00, or 43 per cent of total resources. They produced income of $97,542.77, or at the rate of .0498. Included in loans and discounts were items upon which no income was accrued, due to delinquency, as follows:

Commercial loans	$38,900.00
Real-estate loans	21,000.00
	$59,900.00

If these loans were interest producing, then an additional $751.44 in interest would result and the average rate of return would change from .04979 to .05018.

The following tabulation shows the make-up of the loan and discount total, the interest earned for the quarter, and the rate earned by classes:

CLASSIFICATION	AVERAGE AMOUNT	INTEREST EARNED	RATE
Call loans	$ 31,000.00	$ 38.75	.0150
Demand loans	476,000.00	5,676.30	.0477
Time loans	6,152,000.00	76,619.17	.0500
Real-estate loans	1,114,000.00	14,342.75	.0515
Contract loans —Bond Department	56,000.00	793.80	.0567
Advances to trusts	4,000.00	60.00	.0600
Overdrafts	2,000.00	12.00	.0250
Total	$7,835,000.00	$97,542.77	.0498

Comparison of main loan classifications, first quarters of 1933, 1932, and 1931, follows:

Classification	First Quarter					
	1933		1932		1931	
	Av. Amt.	Rate	Av. Amt.	Rate	Av. Amt.	Rate
Call loans	$ 31,000.00	.0150	$ 150,000.00	.0201	$ 400,000.00	.0613
Demand loans. ..	476,000.00	.0477	456,000.00	.0524	238,000.00	.0540
Time loans..	6,152,000.00	.0500	6,012,000.00	.0558	7,648,000.00	.0625
Real-estate loans	1,114,000.00	.0515	969,000.00	.0536	851,000.00	.0575

SECURITIES (see Schedule VII)

Securities totaled $4,387,000.00, or 24 per cent of total resources. They produced income of $38,633.02, or at the rate of .0352. Included in securities were items upon which no income was accrued due to delinquency, as follows:

Miscellaneous bonds....................................	$24,000.00
Stocks and securities	11,000.00
	$35,000.00

If these securities were producing current income, then an additional $310.63 in interest would result and the average rate of return would change from .0352 to .0355.

The following tabulation shows the classifications of securities, together with amount and rate of interest earned for the quarter:

Classification	Average Amount	Interest Earned	Rate
U. S. bonds and notes.............	$2,351,000.00	$17,808.82	.0303
Other bonds.......................	1,967,000.00	20,358.45	.0414
Stocks and miscellaneous securities..	69,000.00	465.75	.0270
Total	$4,387,000.00	$38,633.02	.0352

The following tabulation shows average amount invested in securities, together with average rate of return for the first quarters of 1933, 1932, and 1930:

Classification	First Quarter					
	1933		1932		1931	
	Av. Amt.	Rate	Av. Amt.	Rate	Av. Amt.	Rate
U. S. bonds......	$2,351,000.00	.0303	$1,994,000.00	.0346	$1,341,000.00	.0412
Other bonds.. ...	1,967,000.00	.0414	1,940,000.00	.0487	1,560,000.00	.0474
Stocks and securities	69,000.00	.0270	86,000.00	.0310	115,000.00	.0562

REAL ESTATE

Real estate totaled $524,000.00, or 2 per cent of total resources. This total was made up of items as follows:

Bank premises	$425,000.00
Other real estate	129,000.00
	$554,000.00
Deduct:	
Depreciation reserve	30,000.00
	$524,000.00

Returns to the Banking Department from the investment in the bank building are figured at 5 per cent on the unamortized total of $425,000.00. The bank pays rent to the Building Department on a fair basis, just as do other tenants of the building. All building income over and above the 5 per cent allowed the Banking Department on the original investment is allotted to the Building Department.

The other real estate, which averaged $129,000.00 for the quarter, consisted of six city properties and three farms acquired in satisfaction of debt. This real estate produced no net earning; rather, its expense exceeded its income for the quarter. The $824.50 loss was accumulated for the quarter and was charged off to "Loss and Recovery" account on March 31, 1933.

OTHER RESOURCES

Other resources totaled $71,000.00. To the extent of $60,000.00 this was offset by other liabilities. This leaves a net of $11,000.00, which produced no income.

SUMMARY OF RESOURCES

The following tabulation shows a summary of all resources and of the results from their employment:

Classification	Average Amount	Interest Earned	Average Rate	Amount Not Producing Current Income
Cash and exchange	$ 5,620,000.00	$ 7,481.70	.0053	$2,686,000.00
Loans and discounts	7,835,000.00	97,542.77	.0498	59,900.00
Securities	4,387,000.00	38,633.02	.0352	35,000.00
Real estate	524,000.00	5,312.50	.0405	129,000.00
Other resources, less other liabilities	11,000.00	....	.0000	11,000.00
Total	$18,377,000.00	$148,969.99	.0324	$2,920,900.00

From the employment of all resources, then, "A" Bank and Trust Company realized a return of $148,969.99 and an average rate of .0324.

Excluding the cash, checks, collection accounts, and reserve account, which are by nature non-income-producing, the rate of return was .0379.

Excluding, in addition to the regular non-income accounts, the various other resource items which have become dormant, in so far as current income production is concerned, amounting to $234,900.00, the rate of return was .0385.

DEPOSITS (see Schedule IX)

The following comment deals with the bank's deposit liability:

Deposits averaged $16,658,000.00 for the quarter. Interest payments totaled $64,153.03, being at the rate of .0154. Deposits are classified as follows:

Classification	Average Amount	Interest Paid	Rate
Individual and firm deposits	$ 8,793,000.00	$30,047.60	.0137
Public funds..	1,070,000.00	6,446.75	.0241
	$ 9,863,000.00	$36,494.35	.0148
Bank deposits....	5,040,000.00	16,122.18	.0127
Time certificates of deposit	513,000.00	3,809.25	.0297
Savings deposits	1,149,000.00	7,727.25	.0269
Official check accounts	93,000.00	.. ..	.0000
		$64,153.03	
Add, premium, depository bonds....	.. ..	102.00	... .
Total.................. . ..	$16,658,000.00	$64,255.03	.0154

Interest rates shown refer to gross deposits. After deducting float and loan balances from gross deposits, rates of interest paid are as follows:

Individual and firm deposits	0148
Public funds.......................	.0261
Bank deposits	.0155
All deposits..	.0171

Comparison of average deposits and rates of interest paid, first quarters of 1933, 1932, and 1931, follows:

CLASSIFICATION	FIRST QUARTER					
	1933		1932		1931	
	AV. AMT.	RATE	AV. AMT.	RATE	AV. AMT.	RATE
Individual and firm deposits	$ 8,793,000.00	.0137	$ 8,007,000.00	0141	$ 8,021,000.00	.0142
Public funds	1,070,000.00	0241	1,128,000.00	0260	1,341,000.00	.0263
	$ 9,863,000.00	0148	$ 9,135,000.00	0155	$ 9,362,000.00	.0159
Bank deposits	5,040,000.00	0127	5,138,000.00	0136	4,993,000.00	.0135
Certificates of deposit	513,000 00	.0297	412,000.00	.0300	461,000.00	.0298
Savings deposits	1,149,000.00	.0269	1,104,000.00	0266	998,000.00	.0262
Official checks	93,000.00	0000	102,000.00	0000	98,000.00	.0000
Total	$16,658,000.00	0154	$15,891,000.00	0159	$15,912,000.00	.0161

	FIRST QUARTER		
	1933	1932	1931
Total interest paid	$64,153.03	$63,457.47	$64,114.35

EXPENSES OTHER THAN INTEREST

The following tabulation shows operating expenses of the Commercial Banking Department, other than interest paid, for the first quarters of 1933, 1932, and 1931:

EXPENSE	FIRST QUARTER		
	1933	1932	1931
Officers' salaries	$ 6,078.47	$ 7,200.00	$ 8,500.00
Employees' wages	15,406.22	17,380.40	19,475.00
Other expenses	9,543.88	11,970.81	11,313.44
Total	$31,028.57	$36,551.21	$39,288.44

BOND DEPARTMENT

The operations of the Bond Department resulted in a net departmental earning of $4,368.01. Summary follows (see Schedule II):

Income from bond sales		$11,089.55
EXPENSES:		
Officers' salaries	$1,212.00	
Employees' wages	2,463.86	
Salesmen's commissions	991.13	
Other expenses	2,054.55	
		6,721.54
Net earnings		$ 4,368.01

The following tabulation shows Bond Department sales and gross income from sales for the first quarters of 1933, 1932, and 1931:

CLASSIFICATION	1933		1932		1931	
	Sales	Gross Inc.	Sales	Gross Inc.	Sales	Gross Inc.
Corporations	$122,000.00	$ 1,836.89	$104,000.00	$ 1,698.76	$ 94,000.00	$ 1,346.15
Municipals	336,000.00	8,280.51	308,000.00	7,843.20	198,000.00	4,323.03
Foreigns	11,000.00	669.29	39,000.00	1,920.00	101,000.00	4,938.40
Land banks	6,000.00	207.56	22,000.00	796.50	49,000.00	1,415.56
U. S. governments	40,000.00	95.30	56,000.00	118.00	33,000.00	45.05
Total	$515,000.00	$11,089.55	$529,000.00	$12,376.46	$475,000.00	$12,068.19

Comparison of Bond Department expense classifications follows:

CLASSIFICATION	FIRST QUARTER		
	1933	1932	1931
Officers' salaries	$1,212.00	$1,212.00	$1,412.00
Employees' wages	2,463.86	2,501.50	2,850.00
Commissions	991.13	1,005.05	1,115.20
Other expenses	2,054.55	2,077.68	1,967.47
Total	$6,721.53	$6,796.23	$7,344.67

BUILDING DEPARTMENT

The operations of the Building Department resulted in a net departmental earning of $6,457.59 for the quarter as follows (see Schedule III):

INCOME:		
Rents received	$19,540.93	
Miscellaneous income	47.86	
		$19,588.79
EXPENSES:		
Employees' wages	$2,833.67	
Interest paid to "A" Bank & Trust Company (building investment)	5,312.50	
Other expenses	4,985.03	
		13,131.20
Net earnings		$ 6,457.59

The following tabulation shows rental income and vacancies for the first quarters of 1933, 1932, and 1931:

	FIRST QUARTER					
	1933		1932		1931	
	Income	Vacancies	Income	Vacancies	Income	Vacancies
Rental space	$19,540.93	$1,859.07	$20,373.92	$1,026.08	$20,846.17	$555.83

Delinquency record follows:

MONTH	FIRST QUARTER		
	1933	1932	1931
January	$740.00	$450.00	$ 50.00
February.........	760.00	250.00	175.00
March	850.00	450.00	35.00

Comparison of major expense items follows:

CLASSIFICATION	FIRST QUARTER		
	1933	1932	1931
Employees' wages	$ 2,833.67	$ 3,050.00	$ 3,050.00
Interest paid "A" Bank and Trust Company ...	5,312.50	5,312.50	5,312.50
Other expenses	4,985,03	5,484.81	5,672.73
Total	$13,131.20	$13,847.31	$14,035.23

TRUST DEPARTMENT

The operations of the Trust Department resulted in a net departmental earning of $3,010.87 for the quarter, as follows (see Schedule IV):

INCOME:		
Corporate division	$1,111.16	
Escrow division	407.92	
Safekeeping division	299.87	
Trust division	4,881.90	
Interest income	954.54	
		$7,655.39
EXPENSES:		
Interest paid on funds in trust	$ 724.14	
Officers' salaries	900.00	
Employees' wages	1,208.16	
Other expenses	1,812.22	
		4,644.52
Net departmental earnings		$3,010.87

Comparison of income for the first quarters of 1933, 1932, and 1931 follows:

DIVISION	FIRST QUARTER 1933	1932	1931
Corporate division	$1,111.16	$ 810.00	....
Escrow division	407.92	273.20	$ 486.96
Safekeeping division	299.87	98.41	44.40
Trust division	4,881.90	3,355.94	2,785.17
Interest income	954.54	763.80	799.70
Total	$7,655.39	$5,301.35	$4,116.23

Comparison of major expense items follows:

CLASSIFICATION	FIRST QUARTER 1933	1932	1931
Interest paid on trust funds	$ 724.14	$ 751.14	$ 639.80
Officers' salaries	900.00	900.00	900.00
Employees' wages	1,208.16	1,804.50	1,266.54
Other expenses	1,812.22	1,654.13	822.20
Total	$4,644.52	$5,109.77	$3,628.54

ADMINISTRATIVE DEPARTMENT

Comparison of the major administrative expense items for the first quarters of 1933, 1932, and 1931 follows:

Classification	First Quarter		
	1933	1932	1931
Officers' salaries	$ 5,400.00	$ 6,050.00	$ 6,050.00
Employees' wages	5,250.00	5,400.00	6,725.00
Other expenses	6,459.58	6,638.03	6,802.32
Total	$17,109.58	$18,088.03	$19,577.32

DISPOSITION OF GROSS INCOME

Gross income for the quarter, amounting to $190,857.47, was disposed of as follows:

Disposition	Amount	Ratio to Gross Income
Interest paid on deposits	$ 64,979.17	.341
Interest paid on borrowed money	....	.000
Salaries and wages	40,752.38	.214
Taxes	6,274.65	.031
Other expenses	31,158.89	.165
Losses	8,462.64	.044
Balance for dividends and addition to profits	39,229.74	.205
Total	$190,857.47	1.000

Respectfully submitted,

AUDITOR

EXHIBIT A: "A" BANK AND TRUST COMPANY

INCOME, EXPENSES, NET EARNINGS, AND NET PROFIT, FOR THE FIRST QUARTER ENDED MARCH 31, 1933

	JANUARY		FEBRUARY		MARCH		TOTAL	
INCOME:								
Banking Department:								
Operations	$53,017.04		$50,386.53		$49,120.17		$152,523.74	
Recoveries on items previously charged off	336.20		924.00		788.64		2,048.84	
		$53,353.24		$51,310.53		$49,908.81		$154,572.58
Bond Department		3,934.69		3,313.21		3,841.65		11,089.55
Building Department		6,506.62		6,561.01		6,521.16		19,588.79
Trust Department		1,725.60		2,141.34		3,788.45		7,655.39
Total income		$65,520.15		$63,326.09		$64,060.07		$192,906.31
EXPENSES (exclusive of administrative expenses):								
Banking Department:								
Interest paid	$22,479.55		$20,527.15		$21,248.33		$64,255.03	
Miscellaneous expenses	10,890.30		10,017.21		10,121.06		31,028.57	
Losses charged off	590.22		8,519.27		1,401.99		10,511.48	
		$33,960.07		$39,063.63		$32,771.38		$105,795.08
Bond Department		2,206.48		2,402.39		2,112.67		6,721.54
Building Department		4,266.48		4,738.58		4,126.14		13,131.20
Trust Department		1,651.80		1,535.47		1,457.25		4,644.52
Total expenses		$42,084.83		$47,740.07		$40,467.44		$130,292.34
DEPARTMENTAL EARNINGS:								
Banking Department		$19,393.17		$12,246.90		$17,137.43		$48,777.50
Bond Department		1,728.21		910.82		1,728.98		4,368.01
Building Department		2,240.14		1,822.43		2,395.02		6,457.59
Trust Department		73.80		605.87		2,331.20		3,010.87
Total departmental earnings		$23,435.32		$15,586.02		$23,592.63		$62,613.97
Deduct:								
General administrative expenses	$ 6,287.90		$ 5,569.73		$ 5,251.95		$17,109.58	
Reserve for taxes	2,091.55		2,091.55		2,091.55		6,274.65	
		8,379.45		7,661.28		7,343.50		23,384.23
Net profit		$15,055.87		$ 7,924.74		$16,249.13		$39,229.74

EXHIBIT B: "A" BANK AND TRUST COMPANY

INCOME, EXPENSES, NET EARNINGS, AND NET PROFIT—COMPARATIVE—FOR FIRST QUARTERS OF 1933, 1932, AND 1931

	First Quarter					
	1933		1932		1931	
INCOME:						
Banking Department:						
Operations	$152,523.74		$165,833.14		$171,503.92	
Recoveries on items previously charged off	2,048.84		1,170.03		2,031.12	
		$154,572.58		$167,003.17		$173,535.04
Bond Department		11,089.55		12,376.46		12,068.19
Building Department		19,588.79		21,473.92		21,292.17
Trust Department		7,655.39		5,301.35		4,116.23
Total income		$192,906.31		$206,154.90		$211,011.63
EXPENSES (exclusive of administrative expenses):						
Banking Department:						
Interest paid	$ 64,255.03		$ 63,457.47		$ 64,114.35	
Miscellaneous expenses	31,028.57		36,551.21		39,288.44	
Losses charged off	10,511.48		7,761.00		3,324.95	
		$105,795.08		$107,769.68		$106,727 74
Bond Department		6,721 54		6,796.23		7,344.67
Building Department		13,131.20		13,847.31		14,035.23
Trust Department		4,644.52		5,109.77		3,628.54
Total expenses		$130,292.34		$133,522.99		$131,736.18
DEPARTMENTAL EARNINGS:						
Banking Department		$ 48,777.50		$ 59,233.49		$ 66,807.30
Bond Department		4,368.01		5,580.23		4,723.52
Building Department		6,457.59		7,626.61		7,256.94
Trust Department		3,010.87		191.58		487.69
Total departmental earnings		$ 62,613.97		$ 72,631.91		$ 79,275.45
Deduct:						
General administrative expenses	$ 17,109.58		$ 18,088.03		$ 19,577.32	
Reserve for taxes	6,274.65		6,500.00		6,850.00	
		23,384.23		24,588.03		26,427.32
Net profit		$ 39,229.74		$ 48,043.88		$ 52,848.13

EXHIBIT C

"A" BANK AND TRUST COMPANY

Reconciliation of the Undivided Profits Account for the First Quarter, 1933

Balance, beginning of quarter		$248,444.90
Add:		
Net profit from operations		47,692.38
		$296,137.28
Deduct:		
Loss charged off, less recoveries on items previously charged off	$ 8,462.64	
Quarterly dividend	20,000.00	
Transfer to "Reserve for Security Depreciation"	5,000.00	
		33,462.64
Balance, end of quarter		$262,674.64

EXHIBIT D: "A" BANK AND TRUST COMPANY

Average Balance Sheet for the First Quarter Ended March 31, 1933

Resources

Cash and sight exchange:		
Cash, checks, and exchange for clearance	$ 495,000.00	
Collection accounts (items in transit)	1,176,000.00	
Federal Reserve Bank, reserve account	1,015,000.00	
Due from other banks	2,934,000.00	
		$ 5,620,000.00
Loans and discounts:		
Call loans	$ 31,000.00	
Demand loans	476,000.00	
Time loans	6,152,000.00	
Real-estate loans	1,114,000.00	
Contract loans, Bond Dept.	56,000.00	
Advances to trusts	4,000.00	
Overdrafts	2,000.00	
		$ 7,835,000.00
Securities:		
U. S. gov. bonds and notes	$2,351,000.00	
Other bonds	1,967,000.00	
Stocks and misc. securities	69,000.00	
		4,387,000.00
Real estate:		
Bank building	$ 395,000.00	
Other real estate owned	129,000.00	
		524,000.00
Other resources:		
Customers' liability, account letters of credit	$ 26,000.00	
Interest earned, not collected	37,000.00	
Other resources	8,000.00	
		71,000.00
Total resources		$18,437,000.00

Liabilities

Capital account:		
Capital stock	$1,000,000.00	
Surplus	400,000.00	
Undivided profits	241,000.00	
Current period profits	19,000.00	
		$ 1,660,000.00
Reserves:		
Loan and discount reserve	$ 15,000.00	
Reserve for security depreciation	27,000.00	
Contingent reserve	17,000.00	
		59,000.00
Deposits:		
Commercial deposits	$8,793,000.00	
Public funds	1,070,000.00	
Bank deposits	5,040,000.00	
Certificates of deposit	513,000.00	
Savings deposits	1,149,000.00	
Official check accounts	93,000.00	
		16,658,000.00
Bills payable and rediscounts		......
Other liabilities:		
Our liability, account letters of credit	$ 26,000.00	
Accrued interest, taxes, and expense	31,000.00	
Other liabilities	3,000.00	
		60,000.00
Total liabilities		$18,437,000.00

EXHIBIT E

"A" BANK AND TRUST COMPANY

BALANCE SHEET OF THE TRUST DEPARTMENT, MARCH 31, 1933

ASSETS

CASH IN BANK:		
Corporate division	$ 25,101.01	
Escrow division	6,313.26	
Custody division	5,817.29	
Trust division	211,633.80	
		$ 248,865.36
SECURITIES:		
Escrow division	$1,165,564.89	
Custody division	4,233,701.25	
Trust division	1,762,062.08	
		7,161,328.22
REAL ESTATE AND PERSONAL PROPERTY:		
Trust division		521,306.22
		$7,931,499.80

LIABILITIES

LIABILITY TO CORPORATE CUSTOMERS:		
Cash		$ 25,101.01
LIABILITY TO ESCROW CUSTOMERS:		
Cash	$ 6,313.26	
Securities	1,165,564.89	
		1,171,878.15
LIABILITY, CUSTODIANSHIPS:		
Cash	$ 5,817.29	
Securities	4,233,701.25	
		4,239,518.54
LIABILITY TO TRUSTS:		
Cash	$ 206,381.60	
Securities	1,762,062.08	
Real estate and personal property	521,306.22	
		2,489,749.90
Accounts payable, "A" Bank and Trust Company (advances to trusts)		5,252.20
		$7,931,499.80

SCHEDULE I

"A" BANK AND TRUST COMPANY

Income, Expenses, and Net Earnings of the Banking Department, for the First Quarter Ended March 31, 1933

	January		February		March		Total	
Income:								
Interest received, deposits with banks	$ 3,412.81		$ 2,409.20		$ 1,659.69		$ 7,481.70	
Interest received, call loans	—0—		—0—		38.75		38.75	
Interest received, demand loans	1,440.82		1,821.30		2,414.18		5,676.30	
Interest received, time loans	26,682.00		25,333.13		24,604.04		76,619.17	
Interest received, real-estate loans	4,770.48		4,712.17		4,860.10		14,342.75	
Interest received, contract loans, Bond Department	281.22		214.10		298.48		793.80	
Interest received, advances to trusts	22.00		22.50		15.50		60.00	
Interest received, overdrafts	1.50		6.30		4.20		12.00	
Interest received, U. S. government securities	5,831.02		5,902.16		6,075.64		17,808.82	
Interest received, other bonds	6,313.39		6,817.70		7,227.36		20,358.45	
Interest and dividends, stocks and miscellaneous securities	151.25		148.75		165.75		465.75	
Interest received, bank building investment	1,770.84		1,770.83		1,770.83		5,312.50	
		$50,677.33		$49,158.14		$49,134.52		$148,969.99
Income received, service and activity charges	$ 831.16		$ 810.21		$ 897.77		$ 2,539.14	
Income received, exchange	201.15		184.19		130.87		516.21	
Income received, miscellaneous sources	388.00		43.71		66.69		498.40	
		1,420.31		1,038.11		1,095.33		3,553.75
Total income		$52,097.64		$50,196.25		$50,229.85		$152,523.74

SCHEDULE I—*Continued*

	January		February		March		Total	
EXPENSES:								
Interest paid, commercial deposits	$10,019.21		$ 9,872.14		$10,156.25		$30,047.60	
Interest paid, public funds	2,195.64		2,003.60		2,247.51		6,446.75	
Interest paid, bank deposits	6,002.11		5,116.14		5,003.93		16,122.18	
Interest paid, certificates of deposit	1,251.13		1,201.90		1,356.22		3,809.25	
Interest paid, savings deposits	2,575.75		2,575.75		2,575.75		7,727.25	
Premiums depository bonds	102.00	$22,145.84	—0—	$20,769.53	—0—	$21,339.66	102.00	$ 64,255.03
Officers' salaries	$ 2,026.15		$ 2,026.15		$ 2,026.17		$ 6,078.47	
Employees' wages	5,417.02		5,206.41		4,782.79		15,406.22	
Rent, light, water, heat	1,590.38		1,590.38		1,590.40		4,771.16	
Telephone and telegraph	140.91		120.16		115.33		376.40	
Stationery and supplies	401.11		247.33		320.67		969.11	
Postage	551.13		499.92		599 45		1,650.50	
Furniture and fixtures	—0—		47.51		—0—		47.51	
Traveling	224.09		164.13		126.56		514.78	
Lunches and suppers	192.41		89.16		49.85		331.42	
Insurance	40.40		36.15		35.90		112.45	
Repairs	11.14		80.31		27.71		119.16	
Publicity	140.90		148.14		127.62		416.66	
Miscellaneous	54.11	10,789.75	73.95	10,329.70	106.67	9,909.12	234.73	31,028.57
Total expenses		$32,935.59		$31,099.23		$31,248.78		$95,283.60
Net departmental earnings		$19,162.05		$19,097.02		$18,981.07		$57,240.14

SCHEDULE II

"A" BANK AND TRUST COMPANY

INCOME, EXPENSES, AND NET EARNINGS OF THE BOND DEPARTMENT, FOR THE FIRST QUARTER ENDED MARCH 31, 1933

	January		February		March		Total	
INCOME:								
Bonds:								
Firms and corporations		$ 312.09		$ 464.40		$1,060.40		$ 1,836.89
Municipal		3,675.91		2,402.61		2,201.99		8,280.51
Foreign		117.14		384.85		167.30		669.29
Federal Land Bank		89.16		17.16		101.24		207.56
United States Government		35.16		11.00		49.14		95.30
Total income		$4,229.46		$3,280.02		$3,580.07		$11,089.55
EXPENSES:								
Officers' salaries	$404.00		$404.00		$404.00		$1,212.00	
Employees' wages	820.00		820.00		823.86		2,463.86	
Salesmen's commissions	390.00		260.13		341.00		991.13	
Rent, light, water, heat	157.92		157.93		157.93		473.78	
Telephone and telegraph	68.40		70.09		91.91		230.40	
Stationery and supplies	79.33		98.49		54.28		232.10	
Postage	66.66		63.02		58.31		187.99	
Traveling	211.12		130.29		244.13		585.54	
Lunches	15.45		—0—		—0—		15.45	
Insurance	10.06		10.06		10.06		30.18	
Publicity	46.92		30.00		35.00		111.92	
Miscellaneous	107.00		50.19		30.00		187.19	
Total expenses		2,376.86		2,094.20		2,250.48		6,721.54
Net departmental earnings		$1,852.60		$1,185.82		$1,329.59		$ 4,368.01

SCHEDULE III

"A" BANK AND TRUST COMPANY

Income, Expenses, and Net Earnings of the Building Department, for the First Quarter Ended March 31, 1933

	January		February		March		Total	
Income:								
Rents received		$6,515.50		$6,404.40		$6,621.03		$19,540.93
Miscellaneous income		14.09		24.61		9.16		47.86
Total income		$6,529.59		$6,429.01		$6,630.19		$19,588.79
Expenses:								
Salaries and wages	$ 978.67		$ 927.50		$ 927.50		$2,833.67	
Light and power	461.18		486.20		452.48		1,399.86	
Ground rent	200.00		200.00		200.00		600.00	
Heating	251.90		243.25		154.85		650.00	
Repairs and maintenance	158.51		130.15		150.50		439.16	
Alterations	102.40		26.00		—0—		128.40	
Water	33.00		32.19		33.00		98.19	
Taxes	100.00		100.00		100.00		300.00	
Insurance	—0—		—0—		112.94		112.94	
Interest paid on bank investment	1,770.84		1,770.83		1,770.83		5,312.50	
Depreciation	400.00		400.00		400.00		1,200.00	
Miscellaneous	1.28		16.20		39.00		56.48	
Total expenses		4,457.78		4,332.32		4,341.10		13,131.20
Net departmental earnings		$2,071.81		$2,096.69		$2,289.09		$ 6,457.59

SCHEDULE IV

"A" BANK AND TRUST COMPANY

Income, Expenses, and Net Earnings of the Trust Department, for the First Quarter Ended March 31, 1933

	January		February		March		Total	
Income:								
Corporate division		$ 401.00		$ 315.54		$ 394.62		$1,111.16
Escrow division		125.50		180.16		102.26		407.92
Safekeeping division		209.07		50.80		40.00		299.87
Trust division:								
Administrator and executor fees	$ 107.07		$ 300.08		$ 270.14		$ 677.29	
Voluntary and testamentary trust fees	1,216.10		1,198.04		1,555.89		3,970.03	
Sinking fund trust fees	174.98		—0—		—0—		174.98	
Guardian and curator fees	—0—		59.60		—0—		59.60	
		1,498.15		1,557.72		1,826.03		4,881.90
Interest income		311.03		345.45		298.06		954.54
Total income		$2,544.75		$2,449.67		$2,660.97		$7,655.39

SCHEDULE IV—*Continued*

	January		February		March		Total	
EXPENSES:								
Officers' salaries	$ 300.00		$ 300.00		$ 300.00		$ 900.00	
Employees' wages	402.72		402.72		402.72		1,208.00	
Rent, light, heat, water	166.66		166.67		166.67		500.00	
Telephone and telegraph	50.50		48.80		79.18		178.00	
Stationery and supplies	98.52		72.92		87.46		258.90	
Postage	25.70		31.60		26.10		83.40	
Traveling	—0—		75.00		—0—		75.00	
Lunches and suppers	1.50		1.50		2.50		5.50	
Insurance	28.36		—0—		—0—		28.36	
Furniture and fixtures	—0—		3.39		100.00		103.39	
Publicity	162.50		195.12		199.50		557.12	
Interest paid on trust funds	234.12		282.40		207.62		724.14	
Miscellaneous	7.00		12.00		3.07		22.07	
Total expense		1,477.58		1,592.12		1,574.82		4,644.52
Net departmental earnings		$1,067.17		$ 857.55		$1,086.15		$3,010.87

SCHEDULE V

"A" BANK AND TRUST COMPANY

Analysis of Expenses by Departments, for the First Quarter Ended March 31, 1933

	Administrative Department		Banking Department		Bond Department		Building Department		Trust Department		Total	
Expenses:												
Interest paid:												
Commercial deposits	—0—		$30,047.60		—0—		—0—		—0—		$30,047.60	
Public funds	—0—		6,446.75		—0—		—0—		—0—		6,446.75	
Bank deposits	—0—		16,122.18		—0—		—0—		—0—		16,122.18	
Certificates of deposit	—0—		3,809 25		—0—		—0—		—0—		3,809.25	
Savings deposits	—0—		7,727 25		—0—		—0—		—0—		7,727.25	
Trust funds	—0—		—0—		—0—		—0—		$724.14		724 14	
Premiums, depository bonds	—0—		102.00		—0—		—0—		—0—		102.00	
		—0—		$64,255.03		—0—		—0—		$ 724.14		$ 64,979.17
Other Expenses:												
Officers' salaries		$ 5,400.00		6,078.47		$1,212.00		—0—		900.00		13,590.47
Employees' wages		5,250.00		15,406.22		2,463.86		$ 2,833.67		1,208.16		27,161.91
Salesmen's commissions		—0—		—0—		991.13		—0—		—0—		991.13
Rent, light, water, heat		2,624.43		4,771.16		473.78		2,148.05		500 00		10,517.42
Ground rent		—0—		—0—		—0—		600 00		—0—		600.00
Telephone and telegraph		227.16		376.40		230.40		—0—		178.48		1,012.44
Stationery and supplies		914.70		969.11		232.10		—0—		258.90		2,374.81
Postage		156.66		1,650.50		187.99		—0—		83.40		2,078.55
Furniture and fixtures		626.91		47.51		—0—		—0—		103.39		777.81
Traveling		168.64		514.78		585.54		—0—		75.00		1,343.96
Lunches and suppers		64.00		331.42		15.45		—0—		5.50		416.37
Insurance		334.73		112.45		30.18		112.94		28.36		618.66
Repairs and maintenance		75.15		119.16		—0—		439.16		—0—		633.47
Publicity		315.18		416.66		111.92		—0—		557.12		1,400.88
Alterations		—0—		—0—		—0—		128.40		—0—		128.40
Building taxes		—0—		—0—		—0—		300.00		—0—		300.00
Depreciation		—0—		—0—		—0—		1,200.00		—0—		1,200.00
Interest on bank investment		—0—		—0—		—0—		5,312 50		—0—		5,312.50
Donations		595.95		—0—		—0—		—0—		—0—		595.95
Director's fees		155.00		—0—		—0—		—0—		—0—		155.00
Miscellaneous		201.07		234.73		187.19		56.48		22.07		701.54
Total		$17,109.58		$95,283.60		$6,721.54		$13,131.20		$4,644.52		$136,890.44

SCHEDULE VI

"A" BANK AND TRUST COMPANY

Analysis of Cash Reserves, Float, and Ratio of These to Deposits, for the First Quarter Ended March 31, 1933

1931	Reserves				Float			Reserve and Float
	Cash	Reserve Account Fed. Res. Bk	Due from Banks	Total Reserve	Transit Collection Accounts	Fed Res Bk. Collection Account	Total Collection Accounts	Total
January	$506,000.00	$ 985,000.00	$2,943,000.00	$4,434,000.00	$530,000.00	$631,000.00	$1,161,000.00	$5,595,000.00
February	489,000.00	1,018,000.00	2,934,000.00	4,441,000.00	544,000 00	647,000.00	1,191,000.00	5,632,000.00
March	490,000.00	1,042,000.00	2,927,000.00	4,459,000.00	525,000.00	651,000.00	1,176,000.00	5,635,000.00
Quarter's average	$495,000.00	$1,015,000.00	$2,934,000.00	$4,444,000 00	$533,000.00	$643,000.00	$1,176,000.00	$5,620,000.00
Ratio to deposits				.266			.070	.336

SCHEDULE VII

"A" BANK AND TRUST COMPANY

Analysis of Bonds and Securities and Interest Received, for the First Quarter Ended March 31, 1933

Period	U. S. Government Bonds and Notes	Other Bonds	Stocks and Miscellaneous Securities	Total
January	$2,289,000.00	$1,970,000.00	$86,000.00	$4,345,000.00
February	2,344,000.00	1,967,000.00	61,000.00	4,372,000.00
March	2,420,000.00	1,964,000.00	61,000.00	4,445,000.00
Quarter's average	$2,351,000.00	$1,967,000.00	$69,000.00	$4,387,000.00
Interest received	$17,808.82	$20,358.45	$465.75	$38,633.02
Average rate	0303	.0414	.0270	.0352

SCHEDULE VIII

"A" BANK AND TRUST COMPANY

Analysis of Loans and Discounts and Interest Received, for the First Quarter Ended March 31, 1933

Period	Call Loans	Demand Loans	Time Loans	Real Estate Loans	Contract Loans Bond Department	Advances to Trusts	Overdrafts	Total Loans
January	$40,000.00	$476,000.00	$6,249,000 00	$1,116,000 00	$50,000.00	$1,000.00	$3,000.00	$7,935,000.00
February	30,000.00	468,000.00	6,130,000.00	1,114,000.00	52,000.00	6,000.00	2,000.00	7,802,000.00
March	23,000.00	484,000.00	6,077,000 00	1,112,000.00	66,000.00	5,000 00	1,000.00	7,768,000.00
Quarter's average	$31,000.00	$476,000.00	$6,152,000 00	$1,114,000 00	$56,000.00	$4,000.00	$2,000.00	$7,835,000.00
Interest received	$38.75	$5,676.30	$76,619 17	$14,342.75	$793.80	$60 00	$12.00	$97,542.77
Average rate	.0150	0477	0500	0515	.0567	.0600	0250	.0498

SCHEDULE IX

"A" BANK AND TRUST COMPANY

Averages of Deposits by Classes, Deductions for Float and Loans, and Rates of Interest Paid for the Quarter Ended March 31, 1933

Classification	Gross Deposits	Amount of Interest Paid	Rate on Gross Deposits	Deductions Account of Float	Deductions Account of Loans	Total Deductions	Net Interest Bearing Deposits	Average Rate on Net Balances
Commercial deposits	$ 8,793,000.00	$30,047.60	0137	$ 490,000.00	$214,000.00	$ 704,000.00	$ 8,089,000.00	.0148
Public funds	1,070,000 00	6,446.75	.0241	83,000.00	—0—	83,000.00	987,000.00	.0261
Total	$ 9,863,000.00	$36,494.35	.0148	$ 573,000.00	$214,000.00	$ 787,000.00	$ 9,076,000.00	0160
Bank deposits	$ 5,040,000.00	$16,122.18	.0127	$ 898,000.00	—0—	$ 898,000.00	$ 4,142,000 00	0155
Certificate of deposits	513,000.00	3,809.25	.0297	—0—	—0—	—0—	513,000.00	.0297
Savings deposits	1,149,000.00	7,727.25	0269	—0—	—0—	—0—	1,149,000.00	.0269
Check accounts	93,000.00	—0—	—0—	—0—	—0—	—0—	93,000.00	—0—
All deposits	$16,658,000.00	$64,153.03	.0154	$1,471,000.00	$214,000.00	$1,685,000.00	$14,973,000.00	.0171

SCHEDULE X

"A" BANK AND TRUST COMPANY

Notes and Items Charged Off and Recovered, for the First Quarter Ended March 31, 1933

Charged Off	Date	Name	Amount	
Notes	1–31–33	X Company	$4,500.00	
	2–10–33	Balance J. A. T. note	300.00	
	3–31–33	Y Company	4,000.00	
	3–31–33	Z Company	538.98	
Total notes charged off				$ 9,338.98
Items				
	1–12–33	Jones check, signature unauthorized	75.00	
	1–20–33	Shortage in currency pkg., teller No. 3	20.00	
	2– 3–33	Brown check, insufficient	60.00	
	3– 8–33	Jackson check, forgery	93.00	
	3–29–33	Loss on gold, to Federal Reserve Bank	100.00	
	3–31–33	Real estate operating loss for quarter	824.50	
Total items charged off				1,172.50
Grand total charged off				$10,511.48

Recovered	Date	Recovery This Quarter	Recovery Prior to This Quarter	Present Balance	Original Charge-Off	Date of Original Charge-Off	Particulars
Notes	3– 1–33	$1,500.00	$500.00	$2,000.00	$4,000.00	6– 3–31	"C" Company in liquidation
	3– 1–33	500.00	—0—	—0—	500.00	12–21–32	B. R. B. note
Total recovery		$2,000.00					
Items	3–14–33	48.84	—0—	26.00	74.84	11– 8–32	Black check
Grand total, recoveries		$2,048.84					

CHAPTER XIV

BANK COST ACCOUNTING

IN OFFERING this series of discussions on the subject of bank cost accounting it is not the purpose of the writer to attempt to set up arbitrary standards of bank costs and arbitrary methods of bank cost derivation and to say that those standards and those methods are right and that others are wrong. Such, specifically, is not the purpose; rather it is hoped that, all technicalities dismissed, the procedure set forth in these pages may suggest a practical and simple method for the derivation of costs and their application in the average bank. Even in general cost accounting there are many points upon which authorities differ, and while these things provide the basis of interesting academic discussion, still it is felt that they do not vitally affect the comparatively simple principles and procedures necessary to the development of an acceptable bank cost-accounting system, and in these pages such debatable points have been deliberately ignored.

PURPOSES OF BANK COST ANALYSES

As is the case with other forms of analysis, cost figures represent a useful tool of management. Just as the quarterly net-profit figure, shown in the preceding chapter, was analyzed as to the principal factors

Fig. 16. Exhibit A
"A" Bank and Trust Company
Departmental Distribution of Expenses
for the Month of April 1933

Department	Officers' Salaries	Employees' Salaries	Rent, Light, Police, Janitor	Postage	Stationery and Supplies	Telephone	Telegrams	Traveling	Entertainment and Lunches	Insurance	Furniture and Fixtures	Publicity	Miscellaneous	Interest Paid	Total This Month	So Far This Year	So Far Last Year
Administrative (Schedule I)	$ 00000 00	$00000 00	$ 00000 00	$ 00 00	$ 000 00	$ 000 00	$ 00 00	$ 000 00	$ 00 00	$ 000 00	$ 00 00	$ 00000 00	(a) $ 00000 00	$ 00 00	$00000 00	$000000 00	$000000 00
Commercial Banking (Schedule II)	00000 00	00000 00	0000 00	000 00	0000 00	000 00	00 00	000 00	00 00	000 00	000 00	000 00	0000 00	00000 00	000000 00	000000 00	000000 00
Bond (Schedule III)	0000 00	0000 00	000 00	00 00	000 00	00 00	000 00	000 00	0 00	00 00	00 00	00 00	(b) 000 00	00 00	0000 00	00000 00	00000 00
Building (Schedule IV)	00 00	0000 00	000 00	0 00	0 00	0 00	00 00	00 00	00 00	00 00	00 00	00 00	(c) 00000 00	0000 00	00000 00	00000 00	00000 00
Trust (Schedule V)	000 00	0000 00	000 00	00 00	000 00	000 00	00 00	00 00	0 00	000 00	00 00	000 00	000 00	000 00	0000 00	00000 00	00000 00
Total	$ 00000 00	$00000 00	$ 00000 00	$ 000 00	$ 00000 00	$ 000 00	$ 000 00	$ 000 00	$ 000 00	$ 000 00	$ 000 00	$ 00000 00	$ 00000 00	$000000 00	$000000 00	$000000 00	$000000 00
Tax reserve															$ 000000 00	$000000 00	$00000 00

Recapitulation

Expense, major departments	$000000 00
Tax reserve	00000 00
Total	$000000 00

(a)	
Donations	$ 000 00
Directors' fees	000 00
Miscellaneous	000 00
	$ 0000 00

(b)	
Dues and subscription	$ 00 00
Commissions paid	000 00
Miscellaneous	0 00
	$ 000 00

(c)	
Light and power	$ 000 00
Water	0 00
Heating	000 00
Alterations	000 00
Depreciation	0000 00
Miscellaneous	0 00
	$ 0000 00

from which it was derived, so each of those factors may, in turn, be analyzed to the end that relative values may be assigned and each individual piece or parcel of the business may be weighed and adjudged as to its actual value. As an example, consider the Bond Department operation which resulted in a net profit of say $500. Further study of the matter may develop the information that this $500 was realized from fifty bond sales, forty of which produced a profit of $650, while ten resulted in a loss of $150. To a manager, this is interesting information. Again, consider the Commercial Banking operation. Through the employment of all depositors' funds and the bank's own capital funds a profit was realized, and it is natural to ask, Which funds or which accounts produced a worthwhile part of this profit, and which produced either no profit or an actual loss? So with other phases of bank operations—which are worth while, which are useless?

The first real purpose of the bank cost accounting is to answer these questions; to resolve bulk transactions into minute particles so that they may be measured individually and evaluated as a forerunner to the correction of those transactions which clearly are unsatisfactory.

Another main purpose of bank cost accounting is that of deriving comparative figures for internal bank use, as the basis for testing bank operating efficiency and progress. Frequent comparisons of detailed cost figures

lead to constructive thinking and planning, and they represent a vital part of the information necessary to operational control.

The basis for the analysis. Cost figures are obtained by applying expenses to the transactions or operations from the performances of which they result. Bank cost accounting, then, has for its basis the study of expenses and activity. In a reasonable and painstaking manner expenses are to be distributed to departments and to divisions of departments; operations and/or transactions are to be analyzed as to their nature and frequency and classified as to the relative time or effort required for their handling, and finally the one is to be applied to the other, due consideration being given to the variance in required effort when one type of transaction is compared with another. Let us consider, first, the distribution of expenses.

Expense distribution. There are three broad classes of expenses: direct, indirect, and administrative. Direct expenses are those immediately pertaining to the actual performance of an operation—a piece of work. In the Commercial Banking Department the salary of the teller is a direct expense, as are the costs of the space in which he works, the light by which he works, the upkeep of the machinery with which his cage is equipped, the insurance with which he is covered, and such expense items as pertain immediately to him and the operation he performs.

Indirect expenses are those which arise from the supervision of the direct efforts and from the maintenance of facilities for the general use and convenience of all direct operating divisions within a given department. In the Commercial Banking Department the salaries and operating expenses of officers and employees who supervise the banking transactions and serve the banking customers, the expenses of rent, light, and janitor service for the commercial banking lobby, and such items represent indirect expenses.

Administrative expenses are those which have to do with furnishing the motive power by which all major departments are made to operate and are controlled. The salary and expenses of the bank's president, the legal expenses, the cost of audit service, the general publicity expenses, examination fees, rent and upkeep of the directors' room, directors' fees, and all such items represent administrative expenses.

For the purposes of this discussion, consider that a major arm of bank operations, such as commercial banking, bond trading, building operation, or trust handling, is termed a department, while a subdivision within a department, such as the bookkeeping, the tellers, or the transit in the commercial banking department, is termed a division.

To further clarify the theory as to the three broad classes of bank expenses, consider that the bank has the following operating departments: Commercial

Banking Department, Bond Department, Building Department, and Trust Department.

To these four departments a fifth may be added, the Administration Department. Having set up a major department to encompass all expenses of administration, it remains that each of the four operating departments has expenses of the two classes, both direct and indirect. The next step, then, is to set up the divisions within each department, a part of which are to be direct operating divisions, while others are to be indirect or supervising divisions. The Commercial Banking Department might be subdivided into divisions as follows:

Division	Nature	Division	Nature
Analysis and interest	Direct	Transit	Direct
Bookkeeping	Direct	Credit	Direct
Collection	Direct	Discount	Direct
Clearings	Direct	Loan and investment	Direct
Distribution	Direct	Chief clerk's	Indirect
Savings	Direct	Customers' service	Indirect
Tellers	Direct	General (banking lobby, etc.)	Indirect

Of course, each department and each division of a department has many kinds of expenses. Expenses chargeable to the transit division might be as follows:

- Officers' salaries
- Employees' wages
- Rent, light, heat, and janitor service
- Telegraph and telephone
- Postage
- Stationery and supplies
- Equipment
- Insurance
- Traveling
- Lunches and suppers
- Miscellaneous

Figure 15 is a chart which shows, graphically, this expense distribution plan. Note that from the large

tank at the top of the chart expenses flow to the major departments, one department then being subdivided to show the flow of expenses both to indirect and direct divisions.

To prepare divisional expense figures for application

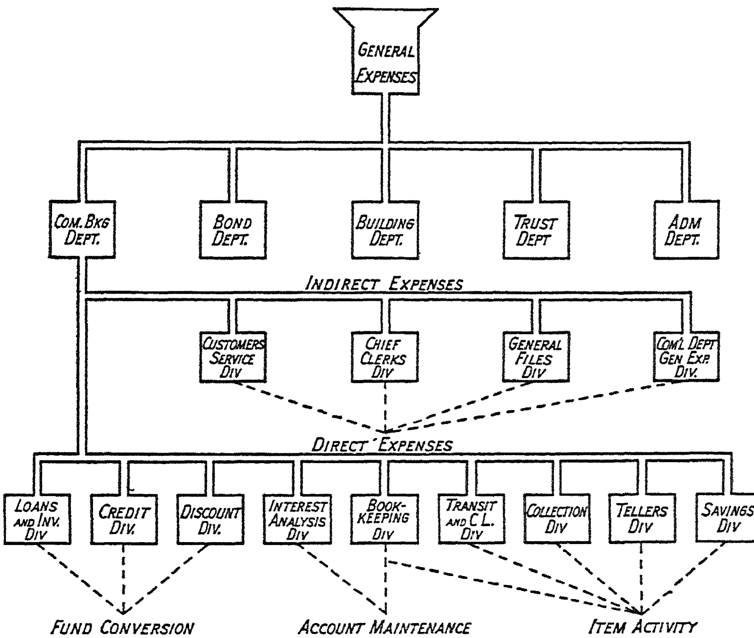

FIG. 15. A chart showing an expense distribution plan

to transactions, operations, or items, indirect expenses must be merged into direct expenses. A number of methods have been used, some very complicated, some quite simple. All are more or less arbitrary. To choose the most arbitrary and at the same time the most simple and probably the most effective of these, indirect expenses are assigned to direct operating

divisions in the ratio of each division's direct salaries to the total direct salaries of the department.

Administrative expenses have long provided a bone of contention among bank accountants. These expenses must appear in the bank's costs, however, on some fair basis. It is suggested that their ratio to the total direct expenses of the bank be determined and that each transaction or item cost, when determined, be increased by that stated percentage of itself in order that it may carry its share of the bank's administrative expense.

Activity (*transactions and operations*). Each department of the bank is destined for performance of some particular line of banking service. It is necessary that complete analyses be made to show the types of operations necessary to the carrying out of the mission of each department and that the volume or frequency of the operations be measured. The mission of the Commercial Banking Department is that of securing deposits and employing them, together with the bank's own capital funds, in such a way as to produce income. The expenses of that department then are to be allotted to the two functions: (1) securing, maintaining, and servicing deposits, and (2) employing funds and servicing investments in which they are employed.

Under the first classification, that of securing, maintaining, and servicing deposits, falls the expense of receiving deposits, clearing checks deposited, maintaining ledger accounts, paying checks drawn on the bank, analyzing float and paying interest, and the

countless other services rendered to depositors. In order to determine detailed costs, it obviously is essential that the number of depositors' accounts be known as well as the number of checks of the various classes deposited, the number of deposits made, the number of checks paid, and so on.

The second classification, that of the fund employment, requires study as to the nature, volume, and details of the funds employed.

In the Bond Department an entirely different problem exists. This is a merchandising operation—bonds are bought and sold. It is necessary that an accounting be made for bonds bought by pieces and by dollar volume—this to be set up separately for each class of bonds, in order that the expenses of bond acquisition may be assigned to the proper classes. Numbers and dollar volume of bonds carried on hand and serviced are to be recorded, in order that maintenance or service expenses may be applied. Bonds sold are to be accounted for by classes of bonds, by territories, and by salesmen, in order that sales expenses may be properly assigned.

Thus each department provides its own particular problem in activity accounting; each of these problems is to be worked out before expenses may be applied and transaction, item, or operation costs derived.

Working out the figures. When expenses have been distributed and activity has been tabulated, the process of cost finding may proceed. Before applying expenses

to activity, one intermediate step is necessary. The need for this arises from the necessity of handling transactions or items of more than one kind. Different transactions may have different time values, and even though handled by the same person, one may be more expensive than another. A teller may have three hundred transactions (customer contacts) per day. Suppose two hundred of these transactions involve the receiving of deposits and one hundred the cashing of checks. It may require, on the average, twice as long to handle a deposit as to cash a check, so the ratio of teller's expense chargeable to each is not two-thirds to deposits and one-third to checks; rather, it is some other ratio which must be determined.

Bank cost accounting requires that transactions or items handled be transformed into "units of effort" before expenses are applied to activity. A common denominator must be found, and this applies to all phases of bank activity in all departments. Either one of two methods may be used:

1. An approximate result may be obtained by analyzing the operations incident to the handling of each type of transaction and assigning unit values on the basis of this showing.
2. An accurate result may be obtained by timing operations under varying conditions and assigning units of value on the basis of seconds of time consumed.

Fig. 17. Schedule I
Administrative Department, April 1933

	Officers' Salaries	Employees' Salaries	Rent, Light, Police, Janitor	Postage	Stationery and Supplies	Telephone	Telegrams	Traveling	Entertainment and Lunches	Insurance	Furniture and Fixtures	Publicity	Donations	Directors' Fees	Miscellaneous	Total This Month	So Far This Year	So Far Last Year
Administrative, officers and secretaries																		
Administrative, general																		
Addressograph division															(a)			
Central files division																		
Comptrollers division																		
Mail and messenger division																		
Legal division																		
Police and janitors division															(b)			
Publicity division															(c)			
Supply and record division															(d)			
Telephone division															(e)			
Vault custody division																		
Total																		

(a) Expenses to be accumulated, then distributed to appropriate divisions and departments throughout the bank on an item basis with appropriate credit to "Addressograph division" in the miscellaneous column.

(b) To be added to rent figure and distributed on square footage basis with appropriate credit to "Police and janitors division" in the miscellaneous column.

(c) Publicity expenses (except salaries and office expenses of publicity director) to be distributed to departments advertised with appropriate credit to "Publicity division" in the miscellaneous column.

(d) Supplies to be charged to supply and record division upon purchase. To be charged to divisions as requisitioned, with appropriate credit to "Supply and record division" in the miscellaneous column.

(e) Telephone expenses, including line charges, salaries, etc., to be distributed at so much per phone or extension; toll charges to be distributed to divisions and departments originating them; all charges distributed are to be credited to the "Telephone division" in the miscellaneous column.

The final process involves the assignment of the loaded divisional expenses (direct expenses plus a share of indirect expenses) to activity, the result being base costs. Add to each base cost the administrative percentage, and the result is the finished cost per transaction or per item.

SUMMARY

It has been indicated in the foregoing comment that the process of cost finding in the bank is simply that of applying loaded direct expenses (direct expenses plus a share of indirect expenses) to items handled or operations performed, cognizance being taken of the relative units of work required in the handling of each item or the performance of each operation. Thus base costs are derived. Final costs are made up of base costs plus an administrative share under the plan suggested.

It is recognized that the theory herein set forth, of applying administrative expenses to base item and operation costs, runs counter to methods practiced by many bank accountants, who frequently dispose of the administrative expense element in one of the following ways:

1. By ignoring it, for cost purposes, under the theory that each piece of business analyzed should be required to produce a profit of sufficient size to absorb its share of administrative expense and still represent a worth-while profit.

2. By assessing administrative expenses, largely, against the bank's resources. Under this plan, administrative expenses are allocated at so much per thousand dollars of resources (actually deposits and capital).

An objection to the first method just mentioned is that costs, when derived, are not complete—a considerable portion of the bank's expense account is not accounted for and a series of mental calculations is required on the part of the person who uses cost figures to determine the actual status of the piece of banking business under analysis.

An objection to the second method is that the plan penalizes the substantial bank depositor to the benefit of the small depositor. It is felt that while conversion expenses (lending and investment expenses) increase as the size of the balance to be converted increases, administrative expenses are increased only in the ratio that such increases in conversion expenses bear to the bank's total expense. After all, the administrative element in the bank does not deal purely with the conversion of customers' balances; it deals with every operation in the bank and, in the opinion of the writer, it should be allotted to each and every bank operation on a fair basis.

So the suggestion is made that administrative expenses be considered in the bank's cost analysis, and that they be allotted to each bank operation.

FIG. 18. SCHEDULE II

COMMERCIAL BANKING DEPARTMENT, APRIL 1933

INTEREST PAID													Total This Month	So Far This Year	So Far Last Year
Commercial Deposits															
Public Funds															
Bank Deposits															
Savings Deposits															
Certificates of Deposits															
Bills Payable and Rediscount															
Insurance-Depository Bonds															
Total															

DIVISIONS	Officers' Salaries	Employees' Salaries	Rent, Light, Police, Janitor	Postage	Stationery and Supplies	Telephone	Telegrams	Traveling	Entertainment and Lunches	Insurance	Furniture and Fixtures	Publicity	Miscellaneous	Total This Month	So Far This Year	So Far Last Year
Analysis and Interest																
Bookkeeping, City																
Bookkeeping, Country Banks																
Chief Clerks																
Collection																
Coupon																
Credit																
Customers' Service, City																
Customers' Service, Country Banks																
Discounts and Collateral																
Exchange																
Files																
Loans and Investments																
Recovery																
Savings																
Tellers																
Transit, Clearings, Distribution																
Women's																
Commercial Department, General	(a)	(a)	(b)													
Total																
Interest Paid Accounts																

(a) General Commercial Department expense classification to include under "Salaries and Wages" such officers and employees as may be said to serve the Commercial Banking Department as a whole; not chargeable to any one division.

(b) General Commercial Department expense classification to include under "Rent" all space, such as the Commercial Banking lobby, which serves the department as a whole; not chargeable to any one division.

The matter of activity accounting, one of the vital elements in cost finding, was discussed at some length in a preceding chapter. Expense distribution, however, has been only briefly touched upon and deserves some further analysis. While succeeding chapters, dealing with costs in the various bank departments, consider a complete analysis of the bank's expense account, the average sizable bank, as a matter of fact, has a pretty well developed expense distribution system, which may be made the basis of the expense side of the cost analysis operation. To serve the purpose this distribution must be complete to the point that each department and each division of a department is charged with its full share of the bank's expenses. For this purpose the general administrative element may be set up as a separate department—the General Administrative Department—and within each department the indirect expenses (supervisory expenses) may be set up in separate divisions.

The process of expense distribution is that of posting to each division's expense sheet the various items of expense affecting that division in such a manner that the recapitulation of all division expense totals within a given department represents the total expense of the department. Salaries and wages are to be charged to the various divisions; each division is charged with its share of rent on the basis of floor space used (including one-half the square footage of adjoining aisles, and so

on); light, heat, and janitor service are to be charged divisionally on the basis of square footage; telegraph and telephone expense is to be charged to each division

FIG. 19. SCHEDULE III
BOND DEPARTMENT, APRIL 1933

EXPENSE	BUYING	SELLING	ACCOUNTING AND SERVICE	DEPT. ADM.	TOTAL
Officers' salaries	$000	$000	$000	$000	$000
Employees' wages	000	000	000	000	000
Salesmen's commissions	000	000	000	000	000
Rent, light, police, and janitors	000	000	000	000	000
Postage and insurance	000	000	000	000	000
Stationery and supplies	000	000	000	000	000
Telephone	000	000	000	000	000
Telegrams	000	000	000	000	000
Traveling	000	000	000	000	000
Entertainment, lunches	000	000	000	000	000
Insurance	000	000	000	000	000
Furniture and fixtures	000	000	000	000	000
Publicity	000	000	000	000	000
Dues and subscriptions	000	000	000	000	000
Miscellaneous	000	000	000	000	000
Total, this month	$000	$000	$000	$000	$000
So far this year	000	000	000	000	000
So far last year	000	000	000	000	000

on the basis of telegraph or telephone toll charges plus so much for each telephone or extension, and so forth. For practical purposes, it is advisable to consider such a division as the telephone division as an administrative division, accumulating expenses therein for the month, then crediting them out at the close of the month by charge against other divisions so that the telephone division's expense account shows a zero balance at the month's end. Such a procedure provides an adequate control of the division's expense account and at the

same time provides a convenient medium for distribution purposes.

When all expenses have been distributed, the monthly (or quarterly or annual) expense distribution report may be made. This report is simply a reflection of the information appearing in the expense distribution ledger. It is built up from divisional totals and may well take the form shown in Figs. 16, 17, 18, 19, 20,

FIG. 20. SCHEDULE IV
BUILDING DEPARTMENT, APRIL 1933

EXPENSE	TOTAL THIS MONTH	SO FAR THIS YEAR	SO FAR LAST YEAR
Employees' wages	$000	$000	$000
Janitor supplies	000	000	000
Postage	000	000	000
Stationery and supplies	000	000	000
Telephone	000	000	000
Lunches	000	000	000
Insurance	000	000	000
Furniture and fixtures	000	000	000
Publicity	000	000	000
Alterations	000	000	000
Repair and upkeep	000	000	000
Light and power	000	000	000
Water	000	000	000
Heating	000	000	000
Inspection fees	000	000	000
Miscellaneous	000	000	000
Total	$000	$000	$000
Depreciation	000	000	000
Interest to bank on investment	000	000	000
Total	$000	$000	$000
RECAPITULATION			
Operating expenses	$	000	000
Depreciation and interest	000	000	000
Total	$	$000	$000

and 21, which represent respectively the following classifications of expenses: Exhibit A, summary of

FIG. 21. SCHEDULE V

TRUST DEPARTMENT, APRIL 1933

EXPENSE	CUSTODY DIVISION	ESCROW DIVISION	TRUST AND ESTATE DIVISION	CORPORATE DIVISION	NEW BUSINESS DIVISION	DEPT. ADM.	TOTAL
Officers' salaries	$000	$000	$000	$000	$000	$000	$000
Employees' wages	000	000	000	000	000	000	000
Rent, light, police, and janitors	000	000	000	000	000	000	000
Postage	000	000	000	000	000	000	000
Stationery and supplies	000	000	000	000	000	000	000
Telephone	000	000	000	000	000	000	000
Telegrams	000	000	000	000	000	000	000
Traveling	000	000	000	000	000	000	000
Entertainment and lunches	000	000	000	000	000	000	000
Insurance	000	000	000	000	000	000	000
Furniture and fixtures	000	000	000	000	000	000	000
Publicity	000	000	000	000	000	000	000
Financial services	000	000	000	000	000	000	000
Interest paid on trust funds	000	000	000	000	000	000	000
Miscellaneous	000	000	000	000	000	000	000
Total, this month	$000	$000	$000	$000	$000	$000	$000
So far this year	000	000	000	000	000	000	000
So far last year	000	000	000	000	000	000	000

expenses by departments; Schedule I, expenses of the Administrative Department; Schedule II, expenses of the Commercial Banking Department; Schedule III, expenses of the Bond Department; Schedule IV, expenses of the Building Department; Schedule V, expenses of the Trust Department.

A brief study of the exhibits and schedules presented in these figures will demonstrate the idea. Such a plan provides immediate information, adapted for cost purposes; in addition, it provides a sound basis for audit and control of expenses.

This chapter has been devoted purely to the theory of bank cost finding. In succeeding chapters more detailed material is set forth, department by department, and suggestions as to application and utilization of cost data are made.

CHAPTER XV

COMMERCIAL BANKING DEPARTMENT COSTS

THE BUSINESS of the Commercial Banking Department is largely that of securing the use of depositors' funds and employing them in a useful way. The department's income results from the employment of funds; its expenses result from the two things, (1) cost of acquiring funds and (2) cost of employing funds. The acquisition cost is made up of the direct disbursements of cash to depositors, such as interest paid on balances and the expenses of services rendered depositors. The employment cost (better known as "conversion cost") is made up of the expenses incurred in transforming depositors' funds into earning investments and servicing those investments to the point that interest is received and principal is returned. The total of all acquisition costs and all employment costs should equal the department's total expense account.

In order to be of maximum value, total cost figures are to be broken down into usable units, so that they may be applied to individual parts of the business; for example, so that one deposit account may be analyzed independently of all others. Therein lies the value of operation, transaction, and/or per-item costs.

To set forth more clearly the cost accounting for Commercial Banking Department operations—that is, the derivation of per-item costs—and in the hope of making this discussion of some immediate and concrete value to a bank of smaller size, the problem of a medium-sized bank is included in this chapter. This is another theoretical bank, and for the purposes of this report it is considered that this bank does not have a detailed distribution of expenses; the records reflect only the expenses by classes of expenditure.

Figure 22 shows the distribution of expenses made for the purpose of the analysis. It will be noted that this bank has four operating departments—Commercial Banking, Bond, Trust, and Safe Deposit. To these four departments has been added a fifth, the Administrative, the expense of which bears a ratio of 26 per cent to the total operating expenses of all other departments. Since the Commercial Banking Department is under analysis, it has been subdivided into operating divisions. The following methods were used in distributing expenses:

Officers' salaries and employees' wages distributed on the basis of a study of the duties of each officer and employee.

Rent, heat, light and power, janitor and police service distributed on a square footage basis after determination of relative values of floor space in the respective

FIG. 22. "A" BANK AND TRUST COMPANY

AVERAGE MONTHLY EXPENSE DISTRIBUTION BASED ON THE YEAR 1932

Expense	Total	Bond	Trust	Safe Deposit	Commercial: Invest., Loan Dis and Cr Div	Commercial: Paying and Receiving	Commercial: Bookkeeping	Commercial: Account Maint	Commercial: Transit Clearings and Proof	Commercial: Savings	Commercial: Collection and Exchange	Commercial: Indirect Expense	Adm Expense
Officers' salaries	$ 8,399.99	$ 400.00	$2,216.66		$2,050 00							$1,300.00	$2,433.33
Employees' wages	14,510.50	441.50	2,754.75	271.25	1,820.75	1,812.25	$1,778 53	541.87	$1,999 25	386.10	$ 968 00	643 00	1,093.25
Rent, heat, light, power, jan.	5,177 50a	149.12	602,62	473.88	329.34	409.16	192.95	117.20	149 64	104.03	235 79	944.92	1,468 85
Stationery, printing, supplies.	1,939.24	25 00	264.60		149.00	48.00	549.00	204 91	96.00	55 84	65.00	127.00	354.89
Postage	590.00	8.00	32.00	6.50	90.00		175.00		125 00		45 00		108 50
Telephone and telegraph	410.57	12.26	52.54	3.92	28 44	40 15	14.30		35 20	4.92	13.76	24.34	180.74
Insurance	925.83	14.70	102 90	7.35	71.05	45 70	61.25	194 20	75.95	11 00	34.30	39 20	268.23
Miscellaneous	1,365.00	110.00	338.00		1 50	33.95	18.00	36.00	19.50		12 50	34.00	761.55
Bond commissions paid	17.00	17.00											
Charity and donations	390.00												390.00
Dues and subscriptions	441 50				92.00								349.50
Traveling	147.00												147 00
Entertainment	34.00												34.00
Drayage	95.00											95 00	
Repairs	130.00												130.00
Legal expense	120.00				20.00								100 00
Repairs to safe-deposit boxes	10.00			10.00									
Depreciation	1,000.00	4.20	40.00	43.12	21.00	29.00	248.50	5.00	97.00	11.20	10.50	162.00	328.48
Total	$35,703.13	$1,181.78	$6,404.07	$816.02	$4,673.08	$2,418.21	$3,037.53	$1,099.18	$2,597.54	$573.09	$1,384 85	$3,369.46	$8,148.32b
Advertising } Considered as	2,350.00												
Taxes } capital expense	1,150.00												
Total	$39,203.13												
To eliminate Com. Dept. indirect expense (based on Com. Dept. salaries other than loaning officers):													
Per cent					19.5	19 4	19.1	5 8	21.5	4.2	10.5		
Amount					$ 657.04	$ 653.67	$ 643.56	$ 171.73	$ 737.43	$141.51	$ 364.52	*3,369.46*	
					$5,330.12	$3,071.88	$3,681.09	$1,270.91	$3,334.97	$714.60	$1,749 37		
23 % of Bookkeeping Dept considered maintenance							*846.65*	846.65					
							$2,834.44	$2,117.56					

a Comprising rent, $3,750; heat and power, $625; janitor supplies, $60; porter salaries, $330; police salaries, $302.50, watchman, $110.
b Ratio of general administrative expense to direct operating expense, 26 per cent.

parts of the bank's quarters. (Leading real-estate rental agencies may well be consulted.)

Stationery, printing and supplies distributed from study of requisition blanks signed by the various divisions and individuals.

Postage distributed from copies of requisitions filled by the central buying agency.

Telephone and telegraph distributed on the basis of so much per telephone or extension plus an actual allocation of toll fees and telegraph charges.

Insurance distributed on the basis of personnel and number of accounts for blanket bond; on other known indices for other forms of insurance.

All other expenses distributed on the basis of some known indices, in most cases through study of bills and invoices and the like.

Two things appearing at the bottom of Fig. 22 should be noted; one, the allocation of "Indirect Expense" to operating divisions; the other, the allocation of a share of bookkeeping division expense to the classification "Account Maintenance" (based on a study of the time bookkeepers spend handling entries on their books and the time they spend maintaining their books and accounts).

Considering now the divisions of the Commercial Banking Department as shown in Fig. 22, the "Indirect" has been eliminated. The "Savings" also may be eliminated, to be considered in a subsequent chapter.

The divisions represented in the "Investment, Discount, Credit" classification next receive attention. This expense has to do with the employment of funds, and the final cost unit may be expressed in terms of "Conversion cost per $1,000 of net funds per month."

FIG. 23. "A" BANK AND TRUST COMPANY
AVERAGE AVAILABLE FUNDS AND CONVERSION COST

Capital stock	$ 1,000,000.00	
Surplus	750,000.00	
Undivided profits	200,000.00	
Reserves for taxes, interest, and dividends	100,000.00	
Deposits	15,950,000.00	$18,000,000.00
Deduct:		
Reserves (legal and cash)	$ 1,602,000.00	
Collection accounts	712,000.00	2,314,000.00
Average available funds		$15,686,000.00
Expense of loaning officers, loan and discount division, and credit division		$ 5,330.12
Basic conversion cost per thousand per month		.34
Overhead cost, 26 per cent		.09
Final conversion cost per thousand per month		.43

Figure 23 shows the application of the expenses of fund employment to net available funds. In this case the base cost is 34 cents per $1,000 per month, to which is to be added the share of administrative expense (26 per cent of base expense), making a total of 43 cents.

Consider next the "Account Maintenance." It should be recognized that a part of the expense of bookkeeping does not have to do with activity—there is a

dead carrying cost to a bank account aside from activity. As an example of this principle, consider the installation of plumbing in a house. The pipes are all installed and the faucets are ready to serve, but that in itself is not sufficient to provide water to the occupants. There must be an organization somewhere which provides the water and keeps it under pressure in the mains—a maintenance organization. So with bank accounts; cognizance must be taken of maintenance costs.

FIG. 24. "A" BANK AND TRUST COMPANY
AVERAGE MAINTENANCE COST FOR MONTH

Total maintenance expense (exclusive of activity):		$2,117.56
Number of individual and firm accounts	7,194	
Number of bank accounts	112	
Total number of accounts maintained	7,306	
Basic cost per account per month		.29
Overhead cost, 26 per cent		.07
Final maintenance cost per account per month		.36

Figure 24 shows the distribution of maintenance expense, the unit being "Maintenance Cost per Account per Month." In this case the base cost is found to be 29 cents, to which is added 7 cents for the administrative share, a total of 36 cents per account per month.

Of the Commercial Department divisions shown in Fig. 22, the following are yet to be considered: paying and receiving tellers division, bookkeeping division, transit, clearings, proof division, and collection and

exchange division. All of these divisions have to do with activity created by customers, and their expenses may be resolved into per-item costs. Figure 25 shows item activity of these four operating divisions for an average month.

FIG. 25. "A" BANK AND TRUST COMPANY

ITEM ACTIVITY FOR AN AVERAGE MONTH

Transit, Proof, Clearing Division:		
Checks on own bank:		
Internal (through tellers)	44,251	
In clearings	90,573	
Individual or bank deposits	23,923	
Transit items	67,082	
Railroad checks:		
Bunched	20,514	
Mixed	7,547	
Collection items	2,898	
Tellers' cash tickets	12,266	
Clearing items:		
Bunched	32,896	
Mixed	90,593	
		392,543
Paying and Receiving Tellers Division:		
Items cashed:		
On own bank	17,082	
On transit points	3,250	
On clearing points	5,200	
On railroads	900	
		26,432
Deposits received		20,440
Bookkeeping Division:		
Bank drafts	5,248	
Individual and firm checks	129,579	
		134,824
Bank deposits	2,007	
Individual and firm deposits	21,916	
		23,923
Collection and Exchange Division:		
Collections		6,982
Drafts and cashier's checks issued		4,008
Installment note payments		107
Travelers' check sales		41

As stated in the preceding chapter, consideration must be given to relative values of items of the various classes in so far as time consumed in their handling is concerned. Two methods were suggested: the one, by count of operations required; the other, by measuring seconds of time required. In the present instance it is considered that the timing method has been used.

FIG. 26. "A" BANK AND TRUST COMPANY
TRANSIT PROOF DIVISION: APPLICATION OF TIME STUDY

Items	Time Consumed in Handling in Seconds	Number of Items Handled	Unit	Unit Operations	Per Cent	Expense Allocation
Checks on own bank						
Internal	6.2	44,251	2.38	105,317	10.47	
In clearings	2.6	90,573	1	90,573	9 00	$ 649.32
Individual or bank credit	17 3	23,923	6.65	159,088	15.81	527 26
Transit	10 2	67,082	3.92	262,961	26.14	871 76
Railroad item						
Bunched	2.9	20,514	1 12	22,976	2.28	
Mixed	7 5	7,547	2 88	21,735	2.16	148 08
Collection item	3.6	2,898	1 38	3,999	.40	13 34
Cash tickets	6.2	12,266	2 38	29,193	2.90	96.71
Clearings						
Bunched	3 9	32,896	1 50	49,344	4.90	
Mixed	7.5	90,593	2 88	260,908	25.94	1,028.50
Total		392,543		1,006,084	100.00	$3,334.97

Figure 26 shows the application of the time study to the items handled in the transit, proof, clearings division, the derivation of the percentages of the division's expenses chargeable to each class of items, and the allocation of dollars of expense to classes of items. Figure 27 shows the same process applied to the paying and receiving tellers division, Fig. 28 to the bookkeeping division, and Fig. 29 to the collection and exchange division.

To complete the per-item cost derivation, the results of expense distribution as shown in Figs. 26, 27, 28, and 29 are combined, and the total expenses chargeable to each class of items determined. Under each class, the expense divided by the number of items handled equals

Fig. 27. "A" BANK AND TRUST COMPANY

Paying and Receiving Division: Application of Time Study

Items	Time Consumed in Handling in Seconds	Unit	Number of Items	Unit Operations	Per Cent	Expense Allocation
Deposits received.	40	2	20,440	40,880	60.72	$1,865.25
Checks cashed:						
Checks on own bank	20	1	17,082	17,082	25.38	779.64
Transit items .	20	1	3,250	3,250	4.83	148.37
Clearing items .	20	1	5,200	5,200	7.73	237.46
Railroad items. .	20	1	900	900	1.34	41.16
Total			46,872	67,312	100.00	$3,071.88

Fig. 28. "A" BANK AND TRUST COMPANY

Bookkeeping Division: Application of Time Study

Items	Time Consumed in Handling in Seconds	Unit	Number of Items	Unit Operations	Per Cent	Expense Allocation
Checks on own bank	17.2	1	134,824	134,824	84.93	$2,407.29
Deposits.	16.3	1	23,923	23,923	15.07	427.15
Total . .			158,747	158,747	100.00	$2,834.44

Fig. 29. "A" BANK AND TRUST COMPANY

Collection and Exchange: Application of Time Study

Items	Time Consumed in Handling in Seconds	Unit	Number of Items	Unit Operations	Per Cent	Expense Allocation
Collection item .	75	1.4	6,982	9,775	69.55	$1,216.69
Cashier's checks or drafts.	54	1	4,008	4,008	28.52	498.92
Traveler's check purchases.	215	4	41	164	1.17	20.47
Installment notes .	54	1	107	107	.76	13.29
Total .			10,388	14,054	100.00	$1,749.37

FIG. 30. "A" BANK AND TRUST COMPANY

COST OF ACTIVITY AS MEASURED BY THE UNITS OF OPERATIONS FOR THE AVERAGE MONTH

ITEMS	TRANSIT ITEMS	CLEARING ITEMS	RAILROAD ITEMS	CHECKS ON OWN BANK	DEPOSITS	COLLECTION ITEMS	ISSUANCE OF DRAFTS OR CASHIER'S CHECK	TRAVELERS' CHECK SALE	INSTALLMENT NOTE PAYMENTS	AVERAGE ALL ITEMS
Transit, proof, clearings division (see Fig. 26)	$ 871.76	$1,028.50	$148.08	$ 649.32	$ 623.97	$ 13.34	......	....	.....	$ 3,334.97
Receiving and paying tellers division (see Fig. 27)	148.37	237.46	41.16	779.64	1,865.25	....	......	....	.....	3,071.88
Bookkeeping division (see Fig. 28)	....	....	.....	2,407.29	427.15	....	.....	.....	....	2,834.44
Collection and exchange (see Fig. 29)	....	.....	.....	....	....	1,216.69	498.92	20.47	13.29	1,749.37
Total class cost (basic)	$1,020.13	$1,265.96	$189.24	$3,836.25	$2,916.37	$1,230.03	$498.92	$ 20.47	$ 13.29	$10,990.66
Number of items handled	67,082	123,489	28,061	134,824	23,923	6,982	4,008	41	107	388,517
Basic cost per item	$0.0152	$0.0102	$0.0067	$0.0285	$0.1219	$0.1762	$0.1245	$0.4993	$0.1242	$0.0283
Administrative share, 26 per cent	.0040	.0026	.0018	.0074	.0316	.0458	.0324	.1298	.0323	.0074
Final cost per item	.0192	.0128	.0085	.0359	.1535	.2220	.1569	.6291	.1565	.0357

the base per-item cost. When the administrative share has been added (in this case, 26 per cent of base cost) the finished per-item cost has been derived.

Figure 30 shows this accumulation of data and the final derivation of per-item costs.

To summarize the findings in the case of this theoretical bank, it is found that the following cost elements exist:

ITEM COSTS:	
Transit item	$ 0192
Clearing item	0128
Railroad item	.0085
Debit	.0359
Deposit	.1535
Collection item	.2220
Issuance of draft or cashier's check	.1569
Travelers' check sale	.6291
Installment note payment	.1565
OTHER COSTS:	
Conversion cost per $1,000 per month	.43
Maintenance cost per account per month	.36

Of course the cost figures set forth in the preceding tabulation are purely theoretical and should not be used for practical purposes. The effort has been simply to demonstrate a method of deriving them.

VARIANCES IN BANK COSTS

Bank costs vary in individual banks, even in banks of comparable size and location and similar classes of business. This variance in costs between two banks similarly situated is largely the result of varying administrative policies and operating procedure. One bank

is operated according to one plan, while the other follows quite a different plan, dependent upon the ideas and convictions of the respective managements.

Then, too, bank costs vary according to locality. Wage scales, rent levels, and other items affecting bank expenses are not constant the country over.

Bank costs vary also according to the classes of business serviced. As an example, the cost of handling a transit item is greater in the bank having little transit activity than in the bank which handles transit items in large numbers.

The most significant variance in bank costs, however, occurs between the large bank and the small bank; at least this has been the experience of the writer. It will be found generally that in the small bank the cost of a transit item exceeds the level obtaining in the large bank, while the costs of handling clearing items are just reversed—the small bank seems to have the advantage there. Bank debits (checks on us) rarely show a sizable variance in cost between banks of large and small size; the bookkeeping operation seems about the same everywhere. Costs of collection items, check and draft insurance, and other items of that nature vary with every bank in such a manner that there seems to be no rime or reason which may be applied. This great variance probably is the result of divergent operating policies; in one small bank the collection and exchange division may be manned by a $100 teller in very

restricted quarters, while the bank across the street may employ a $225 teller, supplied with elaborate quarters and facilities for the same purpose. Such things affect bank costs.

The largest variance in costs between the large and the small bank lies in the two classifications: account maintenance cost and conversion cost. The small bank has all the advantage in the account maintenance classification; the cost frequently is only half that experienced by the large bank—the large bank "lay-out" is more elaborate throughout. In the conversion cost classification, the cost situation is reversed; here, the small bank suffers. A large bank having an efficient fund conversion plan usually can perform the operation at a cost of fifteen to twenty cents per $1,000 available funds per month. In the small bank this cost is rarely under forty cents per $1,000 per month, and frequently aggregates sixty cents.

In considering the variances in bank costs, it should be remembered that these variances have been found even when identical analysis methods were used in all cases. It is a difficult task to determine what might be considered practical standard costs for banks, and yet there is a vital need for just such standards. In applying bank costs to depositors' accounts, banks use a wide variety of cost figures and analysis methods. Frequently business firms doing business in numerous cities are confronted with these variances, many costs

varying so widely as to appear ridiculous. The writer is not prepared to say, at this point, that standards of bank costs, constant for the whole of the United States, are a practical matter. The possible advisability of such standards, however, should receive serious consideration on the part of bankers. Two principles may be set up, based upon the experiences of a number of bank accountants, as follows.

1. Uniform methods of account analysis are practical.
2. In each city, or in each community, standards of bank costs are a practical matter provided consideration is given to cost variances between the large and the small bank—in cities, between the downtown bank and the suburban bank particularly. Costs vary widely between banks of the two classes, leading to the following conclusions:
   a. Due to low account maintenance costs in the suburban bank (probably true also of the branch bank), such a bank can profitably carry household and personal accounts in lower brackets, which prove very costly to the downtown bank.

   b. Due to superior transit handling facilities and, in a measure, to more reasonable conversion costs, the downtown bank can handle active collection accounts and even large semi-active balances more advantageously than can the suburban bank. Because of more reasonable

conversion costs, the downtown bank can offer interest attractions which would be ruinous to the suburban bank.

c. The recognition of these two principles might end much expensive and needless competition between banks of the two classes. It is futile for a bank to spend money for the acquisition of business which is sure to be expensive to maintain.

d. It is not the purpose of these remarks to indicate that the downtown bank should have all the large accounts, leaving only the small accounts for the suburban bank. There is a common ground—the need for loan accommodation on the part of bank customers, which places all banks on a par except in extreme cases. Where this element does not enter, where the entire effort in pursuing a bank account is prompted by the desire to build up deposit totals, then, in the opinion of the writer, these conclusions are logical and the new business program of each bank should take cognizance of the types of business the bank is best equipped to handle—profitably.

Tentative standards. In the absence of a nation-wide study of bank costs derived under identical methods and conditions, it is feasible to suggest standards of costs only with certain reservations. Based upon the

study of costs in five large city banks, four suburban banks, and a considerable number of country banks, all located in the middle western section of the United States, in each of which costs varied somewhat from all others, the following tabulation represents the average findings:

Items	Large City Bank	Suburban Bank	Country Bank
Item costs:			
Transit item	$0.015	$0.02	$0.0225
Clearing item.	.01	.01	.005
Bank debit (check on "us") .	.025	.0225	.02
Bank credit (deposit)[1]	.10	.08	.10
Collection item.	.20	.15	.15
Issuance of draft or cashier's check	.10	.12	.12
Other costs:			
Conversion cost (per $1,000 per month)	.20	.40	.60
Maintenance cost (per account per month)	.60	.45	.25

[1]Includes handling of normal volume of currency or silver. Average currency cost, to be used in analyzing accounts depositing or withdrawing currency in abnormal amounts, is sixty cents per $1,000. The average silver and fractional coin cost per $100 is as follows: halves, ten cents; quarters, ten cents; dimes, fifteen cents; nickels, twenty-five cents; and pennies, one dollar.

Currency and silver costs are included, with the suggestion that they be utilized only in exceptional cases, and that in all such cases the currency and silver requirements of the account be carefully studied before costs are applied.

The quantity production theory. Bank costs necessarily are based upon the average transaction. Since this is the case it obviously is true that quantity transactions may be handled at less cost per transaction than can occasional transactions. As an example, consider the distribution division of a bank. This

department certainly can handle one thousand checks deposited by one customer, coming to the division under one total, more efficiently and more expeditiously than it can handle one thousand checks coming from one hundred customers under one hundred totals. Large-volume operations present an interesting field of investigation for the bank accountant. Obviously, the average transaction cost set up through normal methods of cost accounting does not fit the case of each individual item; occasional items create a cost greater than the average; volume of items reduces the cost per item below the average.

While there are accounts in the bank which cannot be correctly evaluated until the quantity factor is worked out and applied, yet the theory is a dangerous one to the average banker and should be avoided by him. In the natural zeal he has to give the bank customers the benefit of the reduced cost, he very likely will forget that there are other customers who should be charged a greater price under the same theory, with the result that the bank does not receive a fair price for services rendered. It is only in occasional cases that credit is rightfully due the depositing customer, and the average bank will do well to ignore the "quantity production theory" entirely.

In the following chapter the application of Commercial Banking Department costs will be discussed.

CHAPTER XVI

ACCOUNT ANALYSIS

BEFORE applying the bank's cost factors to deposit accounts, the banker should satisfy himself that costs in his bank are comparable to those in other banks similarly situated; that is, he should be sure that no overly expensive operations are carried forward which might throw his costs completely out of line with others. One of the real benefits to be derived from the effort applied to cost analysis comes from these comparisons—the organization's weak spots are pointed out and corrections are in order. While the correction effort is in process, the banker may choose to amend some of the cost figures applicable to a customer's accounts, in fairness to the customer, to the point that they are comparable to those obtaining in neighboring banks. This amendment seems justified only if steps are taken, immediately, to bring actual costs to the amended level; otherwise, the banker only deceives himself as to operating results. No customer should be unduly penalized through excessive costs of operation on the part of his bank, and he has a right to expect that the treatment accorded him will be fair and will be untempered by wastefulness or undue elaborateness in banking operations.

Having satisfied himself that the cost levels in his bank are fair, the banker should determine just what form his analysis will take. The basic principle of account analysis is now pretty well fixed; the applica-

Fig. 31. "A" BANK AND TRUST COMPANY
Account Analysis

Average daily book balance:		
Less: Average daily total of uncollected items		$______
Net balance		
Less ... % reserve		______
Net funds for employment		
INCOME		
Income on net funds at ....%:		
Exchange charged		
Total income		______
EXPENSE		
Direct disbursements:		
Interest paid on balances at ....%:		
Exchange absorbed	$______	
Activity costs:		
Drafts on us at ... per item		
Credits at .... per item		
Transit items at . per item		
Clearing house items at .... per item		
Collection items at . per item		
Other services (by analysis)	$______	
Other costs:		
Conversion cost ($ . . per $1,000 per month)	$______	
Maintenance cost ($. . . per account per month)	$______	
Total expense		$______
Profit		
Loss		

tion of the data, though, takes almost as many forms as there are banks that apply it. Consider first this principle:

The value of a deposit account is measured by the income the bank may create from the utilization of the free funds standing to the credit of the account less

the expense of converting funds into income, the interest paid on daily balances, and the expense of servicing the account.

Figure 31 shows a typical account analysis form. Many variations may be made in this form; the "Net funds for employment" may be divided into balances maintained in other banks and funds otherwise employed, with a separate income allowance for each; the average income rate may be reduced to cover conversion costs which, in that way, may be eliminated from actual mention in the form, and so on. Whatever may be the fancy of the banker in such things may well be incorporated in the form he sets up to discuss with his customers, provided the principle of the analysis is not disturbed.

The following comment relates to the various items appearing in the analysis form (Fig. 31).

Average daily book balance is found by adding the gross daily balances in the account for the month and dividing by the number of days in the month.

Average daily total of uncollected funds is found through the process discussed in chapter IV, entitled, "Accounting for Float."

Reserve is expected to cover funds which are not available for employment, due to law or banking regulations, plus the average amount of cash the bank must carry in its vaults to meet the customers' cash requirements. For a Federal Reserve member located

in a Federal Reserve city, this averages 10 per cent legal reserve and about 1 per cent cash; for a Federal Reserve member located in a non-Federal Reserve city, 7 per cent legal and 4 or 5 per cent cash; for a non-member of the Federal Reserve system, an amount set by the banking law of the state in which it is located. In the case of non-Federal Reserve members, the reserve requirement may be set at 15 or 20 per cent. In these cases, however, the bank usually is allowed to class certain investments in municipal bonds and certain bank balances as "reserve," so that the reserve situation in such banks probably resolves itself into a ratio comparable to that in member banks. For general use, 11 or 12 per cent seems practicable. Banks located in central Reserve cities will, of course, deduct the additional reserve required by Federal Reserve Bank regulations.

In banks that maintain a reserve account with the Federal Reserve Bank, but clearing all items through a correspondent bank and having no accounts "Due to banks," and not permitted to deduct balances maintained in correspondent banks from gross deposits before figuring reserves, it seems proper that the reserve ratio for analysis purposes may be applied against gross balances rather than net balances—that is, gross balance less uncollected funds.

Income on net funds is to be calculated at a rate that represents the bank's average return from fund

employment. Figure 32 shows the method of deriving this rate.

Exchange charged represents all actual exchange collections made against the customer during the period.

FIG. 32. "A" BANK AND TRUST COMPANY

AVERAGE INVESTMENT RATE FOR THE YEAR 1932

AVERAGE AVAILABLE FUNDS:		
Capital stock	$ 1,000,000.00	
Surplus	750,000.00	
Undivided profits	200,000.00	
Reserves for taxes, interest, and dividends	100,000.00	
Deposits	15,950,000.00	
		$18,000,000.00
Deduct:		
Reserve with Federal Reserve Bank and cash	$ 1,602,000.00	
Collection accounts	712,000.00	
		2,314,000.00
Average available funds		$15,686,000.00
INCOME FROM INVESTMENTS:		
Interest on loans and discounts	$ 651,314.28	
Interest on U. S. securities	83,275.41	
Interest on miscellaneous securities	29,482.81	
Miscellaneous interest received	67,335.72	
		$ 831,358.32
Total income from investments		
Average investment rate, 5.3 per cent		

Interest paid on balances is an actual item of disbursement, and when interest has been paid to a depositor the amount is to be entered in the analysis.

Exchange absorbed is an actual disbursement covering actual cost of exchange on customer's checks, whether or not such exchange was collected from the customer.

Activity costs (except that termed "Other services") are made up of the various per-item costs, the derivation of which was shown in chapter XV. A method of securing information for the purpose of applying

activity costs has been fully set forth in chapter V under the heading, "Accounting for Activity."

Activity costs—other services is intended to cover the countless services of a special nature rendered to customers. If coupons are handled in considerable numbers, if abnormal deposits and/or withdrawals of silver or currency are made, a special analysis of costs should be performed and the results included under this classification. Many banks carry a special classification for currency and silver service. Since comparatively few accounts are substantially affected, however, this form considers that the cost of handling a deposit includes a normal currency and silver handling, and in the cases of those accounts that do require abnormal service in the way of currency and silver service the cost is set up under "Special services." In the average bank a reasonably accurate accounting may be made for costs of special services by applying against the time required for rendering the service an hourly rate representing 160 per cent of the hourly salary of the individual who performs the service.

Conversion cost represents the cost of converting bank balances into income with return of principal. The formula for deriving conversion costs was included in chapter XV.

Maintenance cost, the dead carrying cost of every deposit account, regardless of activity, was discussed in chapter XV.

Profit or loss represents the purely analytical value of the account and, as is hereinafter discussed, this result should be considered along with all the other factors arising from the customer's contact with the bank, to determine the actual value of that customer to the bank.

The thing that deserves the attention of bank accountants in connection with the "analytical" profit or loss from an account, is the "desired profit." Few bankers are willing to express themselves as to the maximum profit desired, although there is, without a doubt, a trend toward interest allowance to customers based on the analytical profit or loss showing in their accounts. There must be some stable factor, however, upon which to base the minimum profit desired. No ratio based on gross or net balances maintained seems to solve this problem, since there is little or no relation between balances maintained and activity in the average account, and the profit from an account should have some relation to the work, trouble, and effort the maintenance of that account occasions. A suggestion on this subject is that desired profit be based on a theoretical balance, the employment of which will produce income in an amount that will exactly cover the cost of activity.

Having in mind the analysis form to be applied to deposit accounts, we shall consider now its application to these accounts.

APPLYING THE ANALYSIS

It does not appear feasible to attempt to analyze all of the bank's accounts each month; they are far too numerous for a full monthly analysis of each to be performed economically. In considering the problem of analysis, a study of the information shown in Fig. 33 is enlightening. Figure 33 shows that in a particular bank 7,890 checking accounts, or 88 per cent of 8,889 checking accounts, averaged less than $1,000 in daily balance, leaving 999 accounts, or 12 per cent, averaging more than $1,000 in daily balance. The figure shows further that the 88 per cent of accounts totaled only $1,367,000, or 13 per cent of the total demand deposits of $10,439,000.

For analysis purposes, it would seem feasible to divide the accounts listed in Fig. 33 into two classes: (1) those averaging over $1,000 in daily balance; (2) those averaging less than $1,000 in daily balance.

Accounts averaging over $1,000 in daily balance. The form of analysis shown in Fig. 31 (p. 222) is applicable to these accounts. Upon analysis it will be found that the majority of the accounts are eminently profitable. *It is not necessary to continue analyzing such accounts—they need only an occasional analysis to make sure that they are retaining their profit-producing characteristics.*

Accounts shown by the analysis to be unprofitable, or accounts which do not produce a reasonable profit, need

attention. The first step is to study the accounts and *be sure that they really are unprofitable.* It should be remembered that cost figures are based upon the "average" and should be used by bankers much as credit files are used—to guide banking judgment. When the analysis has been continued during a period

FIG. 33. "A" BANK AND TRUST COMPANY
ANALYSIS OF INDIVIDUAL AND FIRM DEPOSITS

Deposits	Number	Per Cent to Total	Amount	Per Cent to Total
Under 50	2,696	30.33	$ 56,327.00	.53
50 to 99	1,318	14.83	94,995.00	.91
Sub total	*4,014*	*45.16*	*150,322.00*	1.44
100 to 199	1,540	17.32	212,957.00	2.04
200 to 299	793	8.92	200,430.00	1.92
300 to 499	802	9.02	314,216.00	3.01
Sub total	*7,149*	*80.42*	*877,925.00*	*8.41*
500 to 999	741	8.34	489,591.00	4.69
Sub total	*7,890*	*88.76*	*1,367,516.00*	*13.10*
1,000 to 4,999	660	7.42	1,433,282.00	13.73
5,000 and over	339	3.82	7,638,262.00	73.17
			$10,439,060.00	
Total active accounts	8,889	100.00		100.00
Total inactive accounts	4,237		21,280.00	
Total all accounts	13,126		$10,460,340.00	

of several months and it is evident that, all compensating conditions having been considered, the account really is unsatisfactory, then the time for action has arrived.

Before dealing with a customer with regard to an unsatisfactory bank account, a banker may well study intimately every feature of that customer's relationship with the bank, and he should be prepared to discuss not only the bank's angle in the matter but also the

customer's. Then when the time arrives for action, the banker should enter the discussion with the determination to end the loss in that particular account, and he should stop at nothing short of that result, else the negotiation is futile, the banker has failed, and the customer's faith in the bank is weakened. *It is far better to ignore the cost element in the business than to apply it ignorantly or ineffectively.*

In considering the correction of unsatisfactory bank accounts, the banker should have in mind, always, that even greater than the opportunity for building larger bank balances, a thing close to the heart of most bankers, is the opportunity thereby provided for amending expensive and unwise banking practices, such as reducing interest allowances to a reasonable basis or eliminating them altogether, and discouraging an excessive use of the bank's checking and collection privileges. He should realize, too, that the task of "correction" provides a job which is big enough to deserve the attention of the "top" men in the bank, and that in few directions can their efforts be so profitably employed as in this.

Finally, service charges are only a means to an end in accounts of this character; they serve to recompense the bank for services rendered during a period of readjustment in the customer's affairs, but they do not provide a means for finally disposing of such a problem. If, after a couple of years of service charges, a bank

customer is still unable or unwilling to maintain a compensating bank balance, then he has automatically classed himself as an undesirable bank customer and may well be eliminated from the bank's books.

Accounts averaging less than $1,000 in daily balance. The bank cannot afford to analyze these accounts with any degree of regularity—the cost is prohibitive. But the bank *can* afford to approximate their value monthly, and this should be done. Normally, banks pay no interest on accounts of this class and, as a result therefore, group methods may be utilized. The process of applying standard figures to accounts in the lower brackets has come to be popularly known as the "service charge."

It is not a simple matter to develop and to outline a service charge plan which will provide the answer to the small account problem. Many accounts in the smaller balance classifications are sources of worthwhile profit to the banks, while many others occasion continuing losses. Many people have turned their attention to the proper analysis treatment to be accorded the small account and a great many plans have been evolved, some arbitrary, some more or less scientifically accurate. In considering service charge plans it should be remembered that the object is to apply the fundamental principles of account analysis to the large number of small accounts without, however, expending on these accounts an undue amount of

labor and effort. Service charge processes, then, should parallel account analysis processes, and the service charge formula should encompass all of the major items appearing in the regular account analysis formula.

A full consideration of the question of service charges to be applied to small bank accounts leads to the conclusion that the final service charge plan—the plan that must come into universal use as a corrective to the present small account abuses—must bear the following characteristics:

1. It will be fair, both to the customer and to the bank.
2. It will closely approximate the actual cost, taking cognizance of the activity in each account.
3. It will be right psychologically, in that its application will tend to reduce the wasteful use of bank checking and collection facilities. Banks today are largely in the position of taking the place of "pocket change."
4. It will be simple of operation, easily comprehended by the customer, and reasonable as to cost of maintenance.

At the present time there are several plans in use that largely meet the requirements just set forth. From the list of such plans, two have been selected for reproduction here. The first, termed for convenience "The Quick Analysis Plan," follows.

QUICK ANALYSIS PLAN

This plan provides an abbreviated analysis of each account, using only the main cost elements—those which are most frequently present in the small account.

MR. ....

Following is an analysis of your account for the month of ....

Maintenance cost[1]	$0.50
Checks paid and deposits credited (25 at $0.035)[2]	.87
Checks deposited for clearance or collection (14 at $0.015)[3]	.21
Other services (for explanation, see reverse side)[4]	.00
Total cost	$1.58
Less income on your *net* balance ($125 at $0.35 per $100)[5]	.44
Service charge	$1.14

[1] The maintenance or "dead carrying cost" is one of the dominant elements in the small account and it must not be ignored.

[2] On the basis of 2½ cents for a check paid and 10 cents for a deposit made, this figure has been averaged at 3½ cents. There is a definite relation between these two items—in order to draw checks a customer must make deposits. In the average bank the ratio of deposits to checks is about 1 to 6. Of course the proper figure of cost for this combination of checks and deposits may be figured for each bank, or the average derived for each community.

[3] Transit and clearing items to be averaged as to cost.

[4] Collections, cashier's checks, special demands for wrapped coin, and so forth are expected to be covered by this classification. Such items occur infrequently in the small account.

[5] Income to be allowed on *net* balances. (Few of the small accounts have an appreciable float element.) Income calculation follows: $1,000 less 11 per cent (reserve) equals $890. $890 at the average income rate (say .053) will produce $47.17 per year. Reducing this by the conversion cost (say $4.80 per $1,000 per year) that is, by $4.27, the applicable income is $42.90 per year, or about $3.50 per $1,000 net balance per month. This is the equivalent of $0.35 per $100 of net balance per month. Care should be taken to keep the income allowance in line with current average income rates.

The second plan chosen for reproduction, here termed for convenience "The Balance Equivalent Plan," follows.

THE BALANCE EQUIVALENT PLAN

The theory of this plan is to resolve all bank costs into the equivalent balance requirement and to charge for any balance deficit, just as the bank charges for a loan through its Discount Department. For this

purpose a uniform rate is adopted, say in this case 6 per cent. On the basis of cost figures used in the previous example, balance requirements are as follows (note that a profit element is added):

Item	Cost	Balance Requirement	Additional Balance Requirement to Cover Profit	Total Balance Requirement
Maintenance	$0.50	$100.00	.	$100.00
Checks paid and deposits made	.035	7.00	$3.00	10.00
Checks deposited (transit and clearings) . . .	.015	3.00	1.00	4.00
Other services (by analysis) .	......	....	......	. ...

The application of this plan follows:

MR.. .. ..

Following is an analysis of your account for the month of ....

Balance required for maintenance.....	$100.00	
Balance required for checks paid and deposits made (25 at $10)..	250.00	
Balance required for checks deposited (14 at $4)	56.00	
Balance required for other services (see reverse side)	.00	
Total balance requirement	$406.00	
Less: your average *net* balance	125.00	
Balance deficit		$281.00
Charge at 6 per cent per annum[1] $1.40		

[1]The "profit element" is responsible for the additional charge assessed against the account, this over the "Quick Analysis Plan."

As has been stated, there are a number of plans in use today that closely approximate the actual cost in the small account, and to the extent that it measures up to the basic requirements for a scientifically accurate service charge, each is satisfactory. Service charges must not be unnecessarily arbitrary, and in this connection, as well as in other forms of account analysis, accuracy, fairness, and simplicity are the guiding principles.

AN EXPERIMENT IN COST ACCOUNTING

Over the period 1929, 1930, and 1931 the writer has undergone an experience (it also was an experiment) with cost accounting in a country bank of a nature so interesting that it seems proper to tell about it here.

In the early part of 1929 a bank in one of the Reserve cities undertook to convince a country correspondent that its account, as maintained, was not only unprofitable but was handled by the Reserve city bank at a considerable loss. The usual resistance was encountered, and it was only as a last resort that the comptroller of the Reserve city bank was instructed to call upon the country banker in a final attempt to adjust the matter. This he proceeded to do, reporting at the bank shortly after the opening of business on a day in September 1929. The banker, who was the president of the country bank, said he had not been able to understand the idea behind all of the correspondent's fuss over the matter, but if the comptroller had anything to say on the subject he would be glad to hear it. The comptroller had a lot to say, particularly about the country bank's own bank accounts, and he found a very attentive listener.

At noon the banker arranged a meeting with the executive officers of each of the other three banks in the town. When all left the luncheon table, about the middle of the afternoon, it had been agreed that the city bank was to send an auditor to analyze costs

in the subject bank and to make comparisons of some vital elements affecting costs in the remaining three banks.

In due time the cost set-up was completed and the comptroller returned to that town to discuss the results. A meeting was called at which all four banks were represented, and the results of the analysis were presented. In that meeting it was agreed that the four banks would join in the establishment of a comprehensive analysis and service charge system as follows:

1. All accounts averaging over $500 in daily balance to be analyzed at regular intervals, and such accounts as proved unprofitable to the banks to be required to make necessary corrections. The analysis plan agreed upon was substantially that shown in Fig. 31 (p. 222), costs prevailing in that town, according to the analyses performed, being used.
2. All accounts averaging less than $500 in daily balance to be approximated in a manner similar to that suggested in this chapter under the title of "The Balance Equivalent Plan."

The time for the inauguration of the plan was set for January 2, 1930. Each bank, in the meantime, did considerable analyzing on its own account in order to get the machinery ready for action. A few days prior to the date set, notice was given through the local newspaper that such a plan was to be installed and

bank customers were invited to call at the bank to discuss the details.

The plan went into effect on the day named, January 2, 1930. The experience of the banks has been uniform. The subject bank, a bank of $200,000 capital with approximately $1,500,000 in deposits, has on three occasions reported its progress under the plan to the aforementioned comptroller. The first letter giving results was written under date of February 6, 1930, just a little more than a month after the plan went into effect. The second letter was written a year later, January 30, 1931, by which time a year's experience had been had. The third letter, dated January 27, 1932, gave the 1931 experiences. Each of the letters tells its own story, and by permission the body of each is quoted below:

> *Letter of February 6, 1930:* "Agreeable to the request contained in your favor of the 4th, we are giving you below a summary of the results of the application of our new analysis system:
>
> "In August 1929 we had 2,843 individual accounts averaging $490. In January 1930 we had 2,522 individual accounts averaging $540. During the month of January we had closed 260 accounts averaging $10.70, making a total loss of $2,782 in deposits. We had three accounts which increased their balance $5,000 each. The actual

activity charge made for the month of January 1930 will be approximately $1,150. The number of checks drawn against individual accounts has been reduced by at least one-third.

"From the bank's standpoint, the results have been so fine that I am now amazed that we ever hesitated about putting it in. From the customer's standpoint, of course, it has caused considerable readjustment and no little complaint—especially from those drawing quite a large number of checks monthly against a very small balance. There have not been nearly as many complaints as we anticipated, and we have found that 90 per cent of the customers are disposed to be fair and want to carry with us sufficient balance to cover the cost of their activity, or to pay the cost incurred.

"There have been some reactions which are a little objectionable in that some of the merchants in town, especially the small ones, have tried to offset the cost involved on their accounts by charging out-of-town customers on their checks. However, we are endeavoring to show them the foolishness of this, and we are making rapid headway in correcting this situation.

"While it is early yet to make predictions, we believe that both our customers and the bank will be very well satisfied with the arrangement, and

that it will result in increased earnings to our bank of at least a thousand dollars a month. We shall be very glad later on to give you further information."

Letter of January 30, 1931. "In reply to your favor of January 29th, will say that I do not anticipate being in .... in the very near future; otherwise, I would not answer your request by mail but would give it to you in person.

"I am very happy to say that our experience with the service charge plan suggested by you has been more than satisfactory. From this source alone in 1930 we earned 6 per cent on our capital, not to mention the savings effected in stationery, clerk hire, investment in an extra posting machine, with the attendant depreciation and interest on the investment. We have operated with one less bookkeeper. The only additional help we took on was to hire a girl to work for the full time each day who had been previously working for half a day.

"In spite of the fact that we closed over 1,000 accounts, our individual deposits increased materially in a year when most banks in the agricultural sections were showing a steady decline in deposits. To better illustrate this, the 1,000 accounts which we closed averaged $22 per

account, or a total of $22,000 loss in deposits. The average balances of the accounts of two national organizations were increased with us in a total of $23,000. The increase in the average balances of these two concerns more than covered the entire loss of the deposits of the 1,000 closed accounts.

"We have absolutely no trouble with our customers about the charge. In fact, the business men in town have been complimenting us very highly for our action in thus strengthening our bank in these strenuous times, and I am quite sure that we are getting many additional deposits from weaker institutions because of this very fact. Only yesterday I heard a prominent business man in this town talking to a visitor from a town where they have had a recent bank failure, and he made this significant statement: 'I am certainly glad the banks here in .... are charging each customer for the services rendered to him, because I feel a lot safer doing business with a bank managed in this way.'

"We have had about 10,000 less checks per month drawn upon us since we established the activity charge than before.

"It is my personal opinion that if the Federal and State Banking Departments are given the authority to check the loans of a bank to avoid losses, there should be no valid reason why they

should not have the authority to check and eliminate the unprofitable accounts.

"All of the .... bankers feel very grateful to you, and if I have not given you all the information that you desire, I shall appreciate it if you will again write me and I will answer any questions you care to ask."

Letter of January 27, 1932. "Knowing that you will be interested in learning the results obtained from application of the activity charge system with which you gave us so much assistance, I am giving below a summary of our past year's experience.

"You will recall that the number of our accounts, as well as the checking activity, decreased approximately one-third shortly after our charges became effective. Both of these items are now showing an increase, as is the cash revenue derived therefrom. This is caused in a measure by the return of former depositors, who have since learned the value of having a checking account and who are now willing to pay for this convenience. It is very seldom indeed that we hear of any objection on the part of our customers to these charges. On the contrary, we are frequently commended.

"Collected cash from activity charges continues to average 6 per cent on our capital, and this does

not take into consideration a very substantial savings in employees' salaries, supplies, or reduction in interest paid. Two bookkeepers are now doing the work which formerly required four, which with a reduction of one employee in the internal-proof department makes a total of three less than we had two years ago.

"The one fact, more than any other, that makes me believe our plan to be fundamentally sound is this: We have seventeen national accounts which upon analysis proved, with one exception, to be unprofitable. We immediately took this up with the companies concerned, and while it took considerable explaining and correspondence, I am happy to report that without exception these accounts are now on a paying basis. The average man is fair, and when you convince him that you are handling his business at a loss he is more than willing to pay his own way.

"We have now come to take these results as a matter of course and firmly believe that it will be a comparatively short time before all banks adopt some such system of charges. The amazing part of it all is that we hesitated so long before putting the plan into effect here. We would not now even consider a return to the former method of conducting business."

In this chapter the means of analyzing bank accounts have been suggested—individual analyses for the larger and more active accounts and group analyses or service charges for the smaller ones. These analyses apply to accounts already on the bank's books and, when carefully applied, they pave the way to increased bank earnings. There is another use to be made of the analysis data, and in the long run it may prove to be the most valuable of all the things to which analysis figures may be applied—that of measuring new business contemplated to be taken into the bank. New accounts may well be taken upon an analysis basis, subject to amendment if, upon analysis, amendments are in order. It may take years for banks to correct present unprofitable business, but certainly the banker is not obliged to take more of that kind of business, knowing what he now knows of its adverse effect upon the bank's profits account.

CHAPTER XVII

SAVINGS COSTS

IN MANY banks the operating plan provides a separate department for savings deposits; in fact, the banking laws of some states require a segregation of savings funds and savings fund investments from funds and investments of other types. In the majority of cases, however, the savings deposits are handled by a division of the Commercial Banking Department and the funds are co-mingled with other bank funds for investment purposes. This discussion is based upon the latter premise, and it is considered that the average return from the employment of savings funds does not differ from the bank's average income rate from the employment of all funds.

There are many good purposes to be served through the application of cost factors to savings deposits. Among them the following, which seem to be particularly desirable, are included:

1. To determine the average net earning rate derived by the bank from its savings deposits.
2. To determine the profit accruing to or the loss sustained by the bank from any savings account or from any group of accounts, classified as to size and activity.

3. To determine the characteristics of a profitable savings account in order that profitable business may be developed and business not bearing those characteristics discouraged.

We shall consider first the net earnings from savings deposits as a whole. In so doing we shall ask the reader to refer back to chapters XV and XVI on "Commercial Banking Department Costs" and "Account Analysis."

EARNINGS FROM SAVINGS DEPOSITS

For purposes of discussion, consider the savings division operated by the Commercial Department of the theoretical bank set up in chapter XV. Figure 22 of that chapter shows the loaded expense (direct expense plus a share of indirect expense) of the savings division to be \$714.60 per month or \$8,575.20 per year. Consider that the division maintains an average of 12,000 accounts, of which 2,000 are inactive, all totaling \$2,620,000.

Using such cost figures shown in chapter XV as are applicable to the present subject, and using the average income rate of $5\frac{3}{10}$ per cent shown in chapter XVI, the following analysis may be made:

YEAR 1932

Average daily balance, savings deposits		\$2,620,000.00
Less: Float	\$ 24,000.00	
Reserve (4 per cent)	104,800.00	
		128,800.00
Net funds for conversion		\$2,491,200.00

INCOME at $5\frac{3}{10}$ per cent			$ 132,033.60
EXPENSE:			
Interest paid (average $2\frac{57}{100}$ per cent)		$ 67,334.00	
Operating expenses:			
Wages	$4,633.20		
Rent, light, power, janitor	1,248.36		
Stationery, printing and supplies	670.08		
Telegraph and telephone	59.04		
Insurance	132.00		
Miscellaneous	134.40		
Indirect apportionment	1,698.12		
		8,575.20	
Item cost (1,500 transit and clearing items at $0.015)		225.00	
General administrative share (26 per cent of $8,575.20)		2,229.55	
Conversion cost ($5.16 per $1,000 net funds)		12,883.56	
			91,247.31
Net earnings			$ 40,786.29

On the basis of this example, operation ratios are as follows:

Average income per $1,000 of savings deposits		$50.39
Deduct:		
Interest paid	$25.70	
Operating expenses	3.36	
Administrative share	.85	
Conversion expense	4.92	
		34.83
Net earnings per $1,000 of savings deposits		$15.56[1]

[1] This represents 1 55/100 per cent.

To break down these aggregate totals and to determine the various factors from which they resulted, a detailed cost analysis of the operation may be made.

DETAILED COSTS

The example used for the purpose of discussing "Earnings from Savings Deposits" may be used for the problem of cost finding in the savings division. The

monthly operating expense total of $714.60 may be divided, by analysis, into three groups of expense items, as follows:

Activity costs	$572.50
New-account costs	67.50
Account maintenance costs	74.60
	$714.60

Activity costs. From a study of the division's activity for an average month, and from a timing of operations, the following tabulation may be set up:

Item	Number Handled Monthly	Unit Value	Unit Operations
A regular savings deposit	2,511	4⅓	10,881
A savings bank deposit	279	9	2,511
A regular savings withdrawal	1,740	5¾	10,007
A Christmas savings deposit	1,700	1	1,700
Total	6,230		25,099

Upon application of activity expenses to unit operations, it is found that the cost of one unit of operation is $0.0228. Then per-item costs follow:

Item	Unit Value	Basic Item Cost	Administrative Share (26%)	Final Per Item Cost
A regular savings deposit	4⅓	$0.0988	$0.0256	$0.1244
A savings bank deposit	9	.2052	.0533	.2585
A savings withdrawal	5¾	.1311	.0341	.1652
A Christmas savings deposit	1	.0228	.0059	.0287

In these figures it is contemplated that the handling of a check included in a deposit is covered by the deposit cost. In any analysis made of savings accounts, the bank's own cost of handling clearing and transit

items should be added, where such items are accepted for deposit.

New-account costs. The cost of stationery and labor involved in opening new accounts was calculated at $67.50 for the average month. A study of savings accounts opened and closed in the average savings division will show a mortality of about 20 per cent of the total number of accounts each year; that is, the turnover will amount to around 20 per cent. This means that 2,400 new accounts must be opened each year in the present case to keep the number of accounts constant. The $67.50 monthly new-account expense, then, refers to 200 new accounts opened within the month, a cost of forty-two cents for each new account handled, including general administrative expense. When the cost of the original deposit is added to this new-account cost it is found that the new account has cost well over fifty cents to place on the books.

If the average life of all accounts is five years (theoretically, since mortality averages 20 per cent per year), then when the new-account cost has been prorated over the life of the account, the annual amortization amounts to around ten cents per year. Then, if an account closes at the end of the first year, it takes with it the unamortized opening cost of forty cents; if it stays in the bank more than five years, then the opening cost has been completely amortized and the account no longer is subject to the annual burden.

The figures used in this example are purely arbitrary, having been adopted solely for purposes of discussion. They may be easily and accurately derived in any savings division.

Maintenance costs. Maintenance of savings accounts involves the care of the ledgers, proofs, interest calculation and entry, and such items. Small, inactive accounts may be transferred to an inactive classification and ordinary maintenance discontinued, provided the bank has adopted the rule of paying no interest on small accounts, say under $10.

In the case under discussion it is considered that such a rule exists, being clearly set forth in the Savings Pass Book, and that only 10,000 of the 12,000 accounts in this savings division are actually maintained as current accounts. The cost of maintenance has been shown to be $74.60 per month or $895.20 per year. This represents, with general administrative expense added, slightly over ten cents per account per year. Each account in the active ledgers is chargeable with ten cents per year to cover maintenance expenses.

A form of analysis for savings accounts. Following is a suggested form of analysis to be applied to an account under five years old, having say five deposits and no withdrawals during the year:

Average balance	$50.00
Less reserve 4 per cent	2.00
Net funds	$48.00

INCOME at $5\frac{3}{10}$ per cent		$2.54
EXPENSE:		
Interest paid at 3 per cent	$1.50	
Activity (5 deposits at $0.125)	.62	
Maintenance and opening cost amortization	.20	
Conversion cost	.24	
		2.56
Net loss		$0.02

It is not anticipated that any bank will make a practice of analyzing individual savings accounts, and this form of analysis has not been developed for that purpose. Its mission, rather, is to suggest a means of testing accounts of certain classes so that standards of performance may be derived and savings division policies formulated with some definite understanding of the cost element present in savings transactions. Like many small items of bank expense, the expense to the bank resulting from the carrying of a petty savings account receives scant attention, but when the annual loss per account is multiplied by several thousand, the small active savings account shows itself to be one of the major bank evils, and it deserves attention in every bank.

APPLYING COSTS

To show the effect of certain cost factors when applied to savings deposits, consider the following examples:

Average balance	$10.00
Less reserve	.40
Net funds	$ 9.60

INCOME at $5\frac{3}{10}$ per cent		$0.51
EXPENSE:		
Interest paid	$0.30	
Activity	.00	
Maintenance and opening cost amortization	.20	
Conversion cost	.04	
		.54
Net loss		$0.03

Consider that one deposit and one withdrawal per month occur, then the analysis is as follows:

Average balance	$10.00
Less reserve	.40
Net funds	$ 9.60

INCOME at $5\frac{3}{10}$ per cent		$0.51
EXPENSE:		
Interest paid	$0.30	
Activity (12 deposits at $0.125—12 withdrawals at $0.165)	3.48	
Maintenance, etc.	.20	
Conversion cost	.04	
		4.02
Net loss		$3.51

Consider an $8 inactive account upon which no interest is paid:

Average balance	$ 8.00
Less reserve	.32
Net funds	$ 7.68

INCOME at $5\frac{3}{10}$ per cent		$0.41
EXPENSE:		
Interest paid	$0.00	
Activity	.00	
Maintenance	.20	
Conversion cost	.04	
		.24
Net profit		$0.17

The savings division, most decidedly, is not the place for unnecessary activity—there is no point in the bank at which activity is more costly.

FIG. 34. ANALYSIS OF SAVINGS DEPOSITS[1]

DATE

Size	Savings		Investment		Dormant		Spending		Futile		No Experience		Grand Total	
	No	Amt	No.	Amt.	No	Amt	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
Under $10														
$10 to $24														
$25 to $49														
$50 to $99														
$100 to $499														
$500 to $999														
$1,000 and over														
Total														

Savings accounts:

Accounts which seem to be following the idea under which savings facilities were first provided, that is, a systematic and steady accumulation of funds with little withdrawal activity.

Investment accounts:

Large inactive deposit accounts in excess of $250 which for one reason or another the customers leave on deposit rather than invest in securities.

Dormant accounts:

Accounts of less than $250 which do not change, being either forgotten or left purely for accretion of interest.

Spending accounts:

Accounts showing a high degree of deposit and withdrawal activity, any or all of which might, however, show good results under careful treatment.

Futile accounts:

Accounts used merely for convenience as a temporary deposit medium for funds, showing constant withdrawals and no deposits, indicating that the balance is dwindling to little or nothing.

No experience:

Accounts in this group include those opened in recent months upon which experience is not yet sufficient to indicate a classification.

[1] The idea upon which this suggested analysis is based was expressed by Mr. Orrin C. Lester, vice-president of The Bowery Savings Bank, New York City, New York, in an article entitled, "Dramatizing Savings Accounts," published in the May 1929 *American Bankers Association Journal.* Grateful acknowledgment is made to Mr. Lester for his kind permission for the reproduction of the idea here.

Banks that have not made a particular study of their savings business can profit from such a study, provided, of course, that action is taken where results are found to be unsatisfactory. As the first step in such a study, a classification of accounts is suggested. Figure 34 is a suggested form for execution. Note particularly the two classifications "Spending" and "Futile." The majority of the division's activity arises from accounts included in those two classifications.

CONCLUSIONS

It seems reasonable to draw the following major conclusions from the data included in this discussion:

1. The dominant element is "interest paid." More than one-half of the gross income derived from savings accounts is paid to the depositor in interest. The need for a control of interest payments on small accounts, and on those which are excessively active, is therefore obvious.

2. The "activity cost" is the factor that destroys the profit element in the small account. Savings transactions carry a high cost.

3. It is more sensible to keep and to develop accounts on the books—that is, minimize mortality—than to campaign for new accounts, since the bank has an investment in all accounts on its books. The ideal situation would be to develop existing accounts and to go out after profitable accounts only.

4. There seems to be adequate justification for the inauguration of a "stop-loss" charge against accounts that close within a short time, say one year, of the date of their opening. Since this is purely a charge to recover out-of-pocket expense, it should be limited in application to costly accounts, either by analysis or by arbitrary balance limits.

5. Inactive savings accounts may well be transferred from active ledgers and placed under separate dispensation, both as an aid to audit control and to minimize the expense of maintenance.

CHAPTER XVIII

MORTGAGE LOAN DEPARTMENT COSTS

THE MAKING of real-estate mortgage loans has always been considered a desirable phase of the banking business. A great number of banks make city residence or farm loans for the investment of their own funds; a smaller number make loans for sale to investors. In the case of banks that make loans purely for their own investment, the security behind the loan constitutes the only point of real concern, but in banks that produce loans for resale the elements of production costs, sales costs, and costs of service present additional cost features for major consideration. As in other bank departments, the nature of the operation must be fully analyzed before the expenses may be properly distributed to operations and unit costs derived.

THE NATURE OF THE OPERATION

When a bank embarks in the business of producing loans for sale to others—that is, in the business of merchandising loans—it is contemplated that the eventual holder of the paper will receive interest at the rate specified in the loan and that the producing bank will receive, separate and apart from the annual interest provision, a commission for services rendered either in

cash or in commission notes payable in annual installments. In some instances the producing bank's commission may be represented by a participation in the annual interest payment; in other instances, due to fluctuations in interest rates, the matter may be further complicated by agreements between the producing bank and the investor whereby the one pays to the other a specified percentage of the interest received, but in the main the producing bank must depend upon the commissions, either cash or deferred, to provide income.

Having produced a loan and sold it to an investor, the producing bank generally has the obligation of servicing it during its life—collecting interest on behalf of the investor; checking taxes and insurances; following delinquencies, some of which may persist to the stage of foreclosure and sale of the security; and finally, collecting the principal with accounting to the investor.

It is this compound factor—this necessity for dealing with both current and deferred income and with both current and deferred expenses—that complicates real-estate mortgage loan accounting, and unless great care is exercised that factor has a tendency to confuse the banker in his estimates of operating results.

SOME GENERAL ACCOUNTING FACTORS

A first requisite of the real-estate mortgage loan accounting system has to do with the situation just outlined. Income is to be distributed to the two

classifications—income from the current year's operations and income from prior years' operations; expenses are to be distributed to the two classifications—expenses of servicing loans produced in prior years and expenses of producing and selling loans produced during the current year.

Income. As has been stated, the producing bank's income results almost entirely from commissions received—cash and deferred. In any one year, then, the bank may receive cash payments from commission notes (deferred commissions) taken in prior years, cash commissions on loans currently produced, and new commission notes maturing in years to come. In addition, the bank may receive an extraneous income from penalty interest on late payments, cash remuneration for special services rendered to investors in connection with loans held by them, and other miscellaneous items of income. The accounting system should provide for the accumulation of these items by classes.

Expense. Expenses are to be analyzed as has been provided for other bank departments and assembled into classifications suitable for application to the various phases of the department's activity. The following classifications are suggested:

CURRENT EXPENSES. Production of loans: agents' commissions; other production expenses. Sale of loans: submission and reinspection; other sales expenses.

DEFERRED EXPENSES. Expenses of normal service; collection expenses; real-estate service expenses.

EXTRAORDINARY EXPENSE ITEMS. Publicity expenses; net losses.

"Current expenses" result from the actual production and sale of loans.

"Deferred expenses" result from the liquidation of the bank's servicing obligations to its investor. The expenses of normal service are expected to cover all costs up to the point of sending a second notice of maturing principal, interest, taxes, or insurance to the borrower.

Collection expenses are expected to cover all costs from the point at which the normal service operation fails to produce results to the foreclosure of property, where necessary.

Real-estate service expenses are expected to cover all costs of administering properties acquired through foreclosure, whether title be vested in the bank or in the investor.

"Extraordinary expense items" result from: (1) the bank's desire to broaden its general field of operations; (2) losses resulting from business chances taken. Extraordinary expenses may be considered as deductions from net income.

As has been shown in connection with other bank departments, indirect expenses are to be loaded on to direct expenses on some fair basis and the administrative share is to be allotted to base costs on a percentage basis.

In examples cited in this discussion, administrative expenses have not been applied.

MEASURING THE DEPARTMENT'S OPERATING RESULTS

When the primary allocations of income and expense have been made, the department's operating results may be approximated from two angles: (1) as to profits from current loan-making activities; (2) as to progress of liquidation of servicing liability on loans produced in prior years.

A statement of operating results for the period of one year might be as follows:

	Applicable to Current Year	Applicable to Prior Year
Income:		
Cash commissions collected	$26,407.40	.....
New commission notes taken (at present worth	18,119.65[1]	......
Commission notes collected	....	$16,719.14
Penalty interest received	..	849.70
Miscellaneous income	362.41	562.41
Total income	$44,889.46	$18,131.25
Expenses:		
Production expenses	23,186.66	..
Sales expenses	3,249.77	...
Normal service expenses	...	4,813.16
Reserve for service on new loans made	3,645.72[2]	....
Collection and real-estate service expenses	..	1,649.89
Reserve for collection and real-estate service expense on new loans.	1,215.40[3]	....
Net losses	.....	1,006.60
Total expenses	$31,297.55	$ 7,469.65
Balance	$13,591.91[4]	$10,661.60[5]

[1]It is contemplated that the bank does not actually take commission notes into its assets, but rather that it maintains a memorandum control over them. To determine the present worth of commission notes for analysis purposes, the face value should first be reduced through the application of the cancellation expectancy and then the balance should be reduced to its present worth through the application of compound discount at some agreed rate of interest.

[2]If a real-estate loan is made on a five-year basis, then the bank has a normal service obligation for five years. To determine the reserve requirement, it is customary to divide

COSTS OF LOAN PRODUCTION

The tabulation of the Real Estate Mortgage Loan Department's operating results shows that certain items of income are credited and certain items of expense are charged to the operations of the current year (or period).

These items have to do with the business of making and selling real-estate mortgage loans, and the real problem of cost accounting is to derive costs that shall be applicable to a single loan or to a group of loans within a given territory. Of course the cost factor, when found, refers to an average loan, just as item costs in the Commercial Banking Department refer to average items.

Where real-estate mortgage loans are produced in more than one territory, income and expenses should be allocated to each territory. In the present instance it may be considered that only one territory is operated, the territory comprising a small city and its surrounding farming community.

the current year's normal service expense by the total number of loans serviced, deriving the cost of servicing one loan for one year. When this figure is multiplied by the number of years the average loan is to be serviced (in this case five years) and the product is reduced to present worth through the application of compound discount, the resultant figure represents the required service reserve for one loan. This times the number of loans produced and gives total reserve required.

[3]The "collection and real-estate service reserve" may be calculated in the same manner as has been provided for the "normal service reserve." Since collection and real-estate service expenses result from misfortunes in connection with only certain loans, however (the average loan does not require more than normal service), this method of calculation is used only in the absence of some better indices upon which to base the reserve requirement.

[4]This balance represents profit before losses.

[5]This balance indicates the progress made in liquidating the service liability and answers the question, Were sufficient funds realized from deferred commissions to care for deferred expenses?

A study of the loans produced by a particular company for a year shows the following:

Classification	Loans Produced	
	Number	Amount
Under $3,000	53	$ 114,300
$3,001 to $5,000	70	266,900
$5,001 to $7,500	59	347,300
$7,501 to $15,000	50	504,450
$15,001 to $25,000	11	198,050
Over $25,000	4	138,000
Total	247	$1,569,000
Average loan, $6,350		

Consider that the operations of this company resulted in the income and expense experience shown in the tabulation on page 259. That tabulation shows that cash commissions and present worth of commission notes taken, together with a small amount of miscellaneous income, amounted to $44,889.46. All of this income is to be credited to the current production of loans. The tabulation shows expenses of production to be $23,186.66, divided say into $6,129.32 agents' commissions and $17,087.34 other production costs. Expenses of sales are shown at $3,249.77; the probable normal service requirement is shown at $3,645.72, and probable collection requirement at $1,215.40. The difference between the total present worth income, $44,889.46, and actual and anticipated expenses, $31,297.55, represents the net income from the operation. From the net income the company must care for any losses it sustains arising from these loans. The balance represents net profit.

Working out the figures. The 247 loans produced aggregated $1,569,000, an average of $6,350 per loan. For making the loans, the department received $44,889.46, or 2 84/100 per cent of the amount lent, paying agents' commissions of $6,129.32, or 39/100 of the amount lent. The net commission then was $38,760.14, or 2 45/100 per cent of the amount lent.

The cost of producing the 247 loans aggregated $17,057.34, or an average of $69.06 per loan. Sales costs amounted to $13.16 per loan; probable normal service requirement amounted to $14.76 per loan; and probable collection requirement amounted to $4.92 per loan.

The average loan of $6,350, then, was made under the following conditions:

INCOME:		
2 84/100 per cent less 39/100 per cent agent's commission, or 2 45/100 per cent net		$155.58
EXPENSE:		
Production cost	$69.06	
Sales cost	13.16	
Probable normal service requirement	14.76	
Probable collection requirement	4.92	
		101.88
Balance for losses and profits		$ 53.70

Application of cost figures. It should be borne in mind that cost figures derived in this manner refer to a theoretical average loan. It undoubtedly is more

costly to produce a $25,000 loan than to produce one of $2,500, yet the costs do not vary as the size of the loan varies; there are certain necessary operations which are common to both loans. Generally it will be found, too, that farm-loan costs exceed those of city loans. If desired, the two classifications (farm loans and city loans) may be set up separately and the average cost of each determined.

With these things in mind, the banker may proceed to review his real-estate mortgage loan business in the light of the information brought out by the cost analysis. In particular, the cost figures enable him to:

1. Consider the entire operation a piece at a time. He can study income rates and deduction of income in the way of agents' commissions; he can see what part of the expense results from production effort, what part results from selling loans, and what is required for the fulfillment of service obligations; and finally he can compare each of these elements with the others and determine whether any one is out of line.
2. Compare, year by year, the record established and note progress or retrogression in each phase of the business.
3. Promptly amend policies that are proven to be unhealthy, as brought out by this detailed analysis.

FIG. 35. RECORD OF FOUR YEARS' OPERATIONS IN A COMBINATION CITY AND FARM LOAN TERRITORY

A COMPANY

LOCATED IN THE MIDDLE WESTERN SECTION OF THE UNITED STATES

	Operating Ratios—the Average Loan							
	1932		1931		1930		1929	
Dollars of loans produced		$2,028,600.00		$1,504,900.00		$1,701,850.00		$1,950,375.00
Number of loans produced	391		330		410		461	
The average loan		5,190.00		4,560.00		4,150.00		4,230.00
INCOME:								
Present worth of commissions received (per cent of amount lent)	4.26%		4.43%		3.54%		3.47%	
Less: agent's commission (per cent of amount lent)	.87%		1.03%		1.12%		1.41%	
Net commissions (per cent and dollars per average loan)	3.39%	$175.94	3.40%	$155.04	2.42%	$100.43	2.06%	$ 87.13
EXPENSE:								
Production cost	$72.66		$89.82		$75.21		$80.00	
Sales cost	13.16		15.93		10.38		12.90	
Probable service requirements	18.23		21.42		18.19		18.19	
Probable collection requirements	6.12		7.24		6.50		5.45	
		110.17		134.41		110.28		116.54
Balance for losses and profit		$65.77		$20.63	Loss	$ 9.85	Loss	$29.41

As a practical demonstration of the value of detailed cost analysis to the mortgage banker, Fig. 35 shows a tabulation of the operating results obtained by one company in a combination city and farm-loan territory for four years.

A study of the information tabulated in Fig. 35 shows that a loss of $29.41 per loan in 1929 compared with a profit of $65.77 in 1932 on approximately the same volume of business. It was found in this territory that too many small loans were being made. The correction included the establishing for small loans of a minimum commission calculated to at least cover the cost of production. It was found that commission rates in effect in 1929 were not sufficient to provide a healthy operation, and they were increased. Agents' commissions were gradually reduced over the period and the company was able to effect some reduction in other production costs.

The cost analysis of the mortgage operation should include a complete analysis of collection costs, particularly as to territory, type of loan, and frequency. When collection requirements increase markedly in one locality or in one territory, that locality or territory should be studied for further signs of deterioration, and frequently the lending operation will be amended or even discontinued in that locality. This particularly is true of the city lending operation, where neighborhoods change in character so rapidly.

GENERAL CONSIDERATIONS

During the present period, the banker engaged in the production of real-estate mortgage loans for sale to others has many problems. For many years he operated upon a constantly rising market and frequently he was unprepared to meet the changed conditions brought about by his abrupt entry into a period of declining real-estate values. To a great extent his attention has been absorbed by troubles resulting from reduced market values of properties upon which loans have been made, and he has not yet become fully awake to the new managerial problems with which he is faced in the conduct of current business. He must recognize these new problems and he must prepare himself to deal with them understandingly and promptly. Such a banker can benefit largely from the establishment of a current cost accounting system in his business.

From the experience of the past few years the banker who has analyzed his business thoroughly has learned that there are many elements in the business of producing loans for sale that are conducive to sudden and unforeseen loss, and he has learned that a safe operation requires reserves not only for anticipated expenses but also for losses which may not be anticipated—and that in substantial amounts.

As a result of his studies, and irrespective of whether he is making money or losing money from the operation, he also is faced with a question as to the wisdom

of conducting a real-estate mortgage loan business as an adjunct to the banking business. When it is considered that, regardless of the terms under which loans are sold to investors, the bank must face the odium which inevitably results from a misfortune in connection with a loan it has sold, the question becomes a vital question and one which every banker must answer for himself.

CHAPTER XIX

BOND DEPARTMENT COSTS

THE Bond Department or the Bond Affiliate of the usual bank conducts a merchandising operation somewhat similar to that found in the Real Estate Mortgage Loan Department, some of the problems of which were discussed in the previous chapter. The function of the Bond Department of the average bank is to buy bonds of various types, usually in wholesale lots, and to retail them to the investing public. While many variations in methods of operations occur between bond departments, both as to classes of items handled and as to the basis upon which they are handled (that is, some participate in originating syndicates or even act as originators as in the case of small municipal issues, while others operate only upon a selling commission basis), the business, in its simplest form, consists of buying and selling bonds.

Income arises from the excess of the selling price over the cost price and from the interest earned on bonds held.

Expenses result from the usual normal items of interest paid, salaries and wages, salesmen's commissions, rent, and other expenses incident to the buying, care, and selling of bonds.

The primary objectives of Bond Department cost analysis, then, are to derive unit or transaction costs so that they may be grouped to show:

1. Which classes of bonds may be profitably handled.
2. In what territory or territories they may be profitably marketed.
3. Comparative results obtained by each salesman.

There are many collateral phases of bond buying and selling to which detailed cost studies may profitably be applied even in the simplest of bond operations. The present discussion, however, is restricted to the obvious questions bearing directly upon the department's operating policy, with the thought that the analysis may be expanded to cover whatever additional features seem desirable.

ANALYSIS OF A BOND DEPARTMENT

Consider now the problem of a theoretical Bond Department. In the interest of simplicity, consider that the bank provides the funds for the department's needs, accepting as return the actual interest earned on bonds held by the department. Such an arrangement leaves only the trading income and the operating expenses of the department to be considered, the department's share of the bank's general administrative expense to be applied as provided in preceding chapters.

The department's operating results. The department confines its operations to corporation, municipal, and

foreign bonds. Syndicate profits and special selling commissions are applied to reduce the carrying cost of the bonds, being taken up pro rata on each sale. The department ended the year with substantially the same volume of bonds on hand as at the beginning of the year.

The year's sales aggregated $4,153,000; gross income amounted to $76,848.95, and expenses to $42,299.91. The profit from operations then was $34,549.04.

Analysis of sales and income. The preliminary analysis of the department's sales and income follows:

	Corporations	Municipals	Foreign	Total
Total sales..........	$1,384,200.00	$2,398,500.00	$370,600.00	$4,153,300.00
Income	27,128.53	42,127.20	7,593.22	76,848.95
Income per $1,000 of sales...	19.60	17.60	20.60	18.50

Upon further study of the department's sales, it is found that bonds are sold over-the-counter, by salesmen in the city, and by salesmen in the surrounding country territory. Consider that sales and income from sales were distributed as follows:

	Counter Sales	City Sales	Country Sales	Total Sales
Corporation bonds				
Volume of sales	$466,200.00	$759,100.00	$158,900.00	$1,384,200.00
Number of sales	98	293	90	481
The average sale ...	$4,700.00	$ 2,600.00	$1,760.00	$ 2,870.00
Income	9,135.73	14,877.05	3,115.75	27,128.53
Municipal Bonds				
Volume of sales . .	$600,100.00	$1,134,000.00	$664,400.00	$2,398.500.00
Number of sales.....	68	145	188	401
The average sale ...	$ 8,800.00	$ 7,800.00	$ 3,530.00	$ 5,980.00
Income	10,475.09	19,958.76	11,693.35	42,127.20

	Counter Sales	City Sales	Country Sales	Total Sales
Foreign bonds				
Volume of sales	$43,800.00	$242,300.00	$84,500.00	$370,600.00
Number of sales.....	8	82	33	123
The average sale.....	$5,470.00	$2,960.00	$2,560.00	$3,000.00
Income	893.14	4,967.83	1,732.25	7,593.22

Analysis of expenses. Consider now the distribution of expenses. The year's expenses, aggregating $42,-299.91, were made up of salaries and wages, salesmen's commissions, rent, traveling expenses, telegraph, telephone, and ticker service, postage, stationery and supplies, and other miscellaneous items. Using the methods outlined in chapter XV for the distribution of Commercial Banking Department expenses, the Bond Department expenses are to be allocated to the various phases of the operation. Making first a distribution to the broad divisions of the operations, it is found that the $42,299.91 was spent for the following purposes:

Bond purchasing expenses		$11,631.79
Accounting and servicing expenses		3,573.67
Sales expenses:		
Agents' commissions..	$ 6,219.41	
Other sales expenses........	20,875.04	
		27,094.45
Total expenses		$42,299.91

Further distribution reflects the following result:

	Corporations		Municipals		Foreign	
Purchasing		$ 2,048.58		$ 9,138.41		$ 444.80
Accounting and servicing . ..		1,708.72		1,424.76		440.19
Sales:						
Agents' commissions	$2,419.72		$3,042.95		$ 756.74	
Other sales expense........	$9,247.21		9,145.21		2,482.62	
		11,666.93		12,188.16		3,239.36
Totals		$15,424.23		$22,751.33		$4,124.35

In analyzing each group by types of sales, the following distribution is made:

	Counter Sales		City Sales		Country Sales	
Corporations						
Purchasing		$ 689.93		$1,123.37		$ 235.28
Accounting and servicing		349.08		1,038.96		320.68
Sales:						
Agents' commissions			$1,918 85		$500.87	
Other sales expense	$1,724.36	1,724.36	5,010.07	6,928.92	2,512.78	3,013.65
Totals		$2,763.37		$9,091.25		$3,569.61
Municipals						
Purchasing		$2,286.45		$4,320.62		$2,531.34
Accounting and servicing		241.40		515.96		667.40
Sales						
Agents' commissions			$1,806.07		$1,236.88	
Other sales expense	$1,191.36	1,191.36	2,454.83	4,260.90	5,499.02	6,735.90
Totals		$3,719.21		$9,097.48		$9,934.64
Foreign						
Purchasing		$52.60		$290 80		$101.40
Accounting and servicing		29.58		291.10		119.51
Sales·						
Agents' commissions			$ 511.24		$ 245.50	
Other sales expense	$ 146.00	146.00	1,400.86	1,912.10	935.76	1,181.26
Totals		$ 228.18		$2,494 00		$1,402.17

Average "per sale" figures. Income and expense items may now be applied on an "average sale" basis as follows:

Corporations	Counter Sales		City Sales		Country Sales	
Amount of sales		$466,200.00		$759,100.00		$158,900.00
Number of sales		98		293		90
Average sale		$ 4,700.00		$ 2,600.00		$ 1,760.00
Income (per cent of sales)	1 96/100		1 96/100		1 96/100	
Less commission paid	0		25/100		31/100	
Net income	1 96/100	$92.12	1 71/100	$44.46	1 65/100	$29.05
Expense:						
Purchase cost	$ 7.04		$ 3.83		$ 2.61	
Accounting and service	3.56		3.56		3.56	
Sales cost	17.59	28.19	17.09	24.48	27.92	34.09
Profit per average sale		$63.93		$19.98	Loss	$ 5.04

Municipals	Counter Sales		City Sales		Country Sales	
Amount of sales		$600,100.00		$1,134,000.00		$684,400.00
Number of sales		68		145		188
Average sale		$8,800 00		$7,800.00		$3,530.00
Income (per cent of sales)	1 76/100		1 76/100		1 76/100	
Less commission paid	0		16/100		18/100	
Net income	1 76/100	$154.88	1 60/100	$124.80	1 58/100	$55.77
Expense:						
Purchase cost	$33.62		$29.79		$13.46	
Accounting and servicing	3.55		3.55		3.55	
Sales cost	17.52	54.69	16.93	50.27	29.25	46 26
Profit		$100.19		$74.53		$ 9 51

Foreign	Counter Sales		City Sales		Country Sales	
Amount of sales		$43,800.00		$242,300.00		$84,500.00
Number of sales		8		82		33
Average sale		$5,470.00		$2,960.00		$2,560.00
Income (per cent of sales)	2 3/100		2 3/100		2 3/100	
Less commission paid	0		21/100		29/100	
Net income	2 3/100	$111.04	1 82/100	$53.87	1 74/100	$44.54
Expense:						
Purchase cost	$ 6.57		$ 3.54		$ 3.07	
Accounting and servicing	3.55		3.55		3 55	
Sales cost	18.25	28.37	17.08	24.17	28.35	34.97
Profit		$82.67		$29.70		$ 9.57

A summary of bond sales results obtained by this theoretical bank shows the following interesting comparisons:

	Counter Sales		City Sales		Country Sales	
	Av. Sale	Profit	Av. Sale	Profit	Av. Sale	Profit
Corporations	$4,700.00	$ 63.93	$2,600.00	$19.98	$1,760.00	Loss $5.04
Municipals	8,800.00	100.19	7,800.00	74.53	3,530.00	9.51
Foreign	5,470.00	82.67	2,960.00	29.70	2,560.00	9.57

For the purposes of this example, it was considered that purchase costs experienced during the year referred specifically to bonds sold during the year. As a practical matter this is not true, and for analysis purposes purchase or acquisition costs should be averaged over

the course of two or more years, and standard costs set up for each type of bond handled.

ANALYSIS BY SALESMEN

It is very interesting to learn the profit-producing capacity of each salesman. To determine this, it is necessary to analyze each salesman's sales and to determine, for each class of bonds he handles, the average sale. If the salesman has a drawing account in addition to regular commissions, all such amounts paid to him should be added as additional commission. If he has traveling expenses, as in the case of country salesmen, they should be allotted directly to his sales. The item of average sales expense per sale, set up under the general analysis hereinbefore described, should be divided into two parts—office sales expense and salesmen's sales expense—in order that each individual salesman's operating record may reflect, separately, the expenses of his own creation as well as the fixed expenses of purchase, service, and sales over which he has no control.

Many bond houses employ salesmen on the basis of base salary plus commissions. From long experience, bond sales managers are able to judge rather accurately, from volume of sales, the worth of each salesman; but where a salesman is handling various types of bonds, each of which carries a different income value and each of which carries a different "average sale" level, an

accurate estimate of a salesman's results becomes difficult. Through the application of unit sales costs the result may be ascertained with a fair degree of accuracy.

GENERAL CONSIDERATIONS

There are other phases of bond operations to which analysis may be profitably applied. In the purchasing of bond issues, particularly in the acquisition of municipals direct from the issuing municipality, interesting and valuable information may be developed. The size of the issue may largely predetermine the profitableness of its sale, since acquisition costs refer primarily to units (issues) purchased and not to dollars of bonds purchased.

A study of bond-selling operations develops numerous points upon which information is desirable, and once such an analysis is begun, Bond Department managers may be depended upon to broaden the scope of the investigation to include specific problems which are theirs alone. As in the case of the example given in this chapter, certain types of bonds may be sold profitably in the home vicinity, but sold only at a loss on each sale in outlying territories. Such are the things that bond managers want to know, and through a carefully developed system of analysis the answer may be provided to a reasonably accurate degree.

As the result of his experience during the past few years, the banker today is in the position of questioning

the real value of a security trading operation as an adjunct to a commercial banking business. Just as a real-estate mortgage loan merchandising activity may operate to destroy confidence in and good will toward the bank when failures occur, so may the security trading activity operate to create dissatisfaction on the part of the bank's customers when market values tend sharply downward and/or when defaults occur. The real question for the commercial banker to decide for himself is, Does not commercial banking represent one line of business and investment banking (security trading) another?

CHAPTER XX

TRUST DEPARTMENT COSTS

THE MISSION of cost accounting in the Trust Department is twofold: (1) to find out what effect the operation of each division has on the department's income, expense, and net earnings; (2) to set up, within each division, standards of cost for the performance of each operation, both to facilitate the internal control and to guide the judgment of the trust officer in assessing fees when fees are not set by law.

The Trust Department operation encompasses a large variety of activities, which may be classified only generally since variations occur even between services of the same general type. The entire operation represents purely a personal service facility offered for the convenience of the customer or offered to be performed in his absence or for him after he is dead. There are four general types of trust service offered by the Trust Department of the average bank:

1. *Safekeeping and/or custody service.* This service, in its simplest form, provides for the safekeeping and care of securities belonging to the customer. Normal safekeeping service includes the clipping of coupons or the acquiring of dividend checks with disposition of the proceeds as the customer may have directed. Custody service includes all matters contemplated by

the safekeeping service and in addition provides for a continuous study of the securities so deposited, generally with right of sale of securities and reinvestment on behalf of the customer.

2. *Escrow service.* This service places the Trust Department in the position to act as "stakeholder" for two or more people in the consummation of business transactions.

As an example of the scope of the department's duties as escrow agent, it serves as the disinterested party in such transactions as:

a. The agent to insure the absolute performance of a contract.

b. Stakeholder in the consummation of a real-estate sale.

c. The agent to provide for a building program on borrowed money.

d. The agent to facilitate bulk sales pending examination of goods.

e. The stakeholder for reorganization committees.

f. Many other similar business transactions.

3. *Trust and estate service.* This service provides for the department to act as administrator or executor of estates and to serve in the capacity of trustee when a trustee service is required. As administrator or executor, the department has the duty of caring for all legal matters in connection with the estate, settling claims against the estate, and finally paying over the

proceeds as provided by the will or by court order. As trustee, the department has the duty of carrying out the terms of the trust agreement, including the final disposition of the values involved as provided therein.

4. *Corporate service.* By this service the Trust Department performs certain functions necessary in the operation of a corporation; acts as registrar of the corporation's capital stock; acts as paying agent for dividends, interest, or principal due on the corporation's bonded debt, and in like matters.

Having in mind this great breadth of services performed by the average Trust Department, consider now the cost element present in the business. Income to the department consists primarily of fees assessed for services rendered. There also is present the element of interest income, since the department has on hand large sums of money which it generally deposits in banks at stated interest rates, all or a part of which is subsequently paid over to the accounts of its customers, dependent first upon the interest arrangement made with or provided by law for the customer and, second, upon the interest arrangement the department is able to make with banks in which the funds are deposited. Expenses are incurred in the performance of the various trust functions and in the supervision exercised over them. All of the three types of expense—direct, indirect, and administrative—are present, and they are

to be distributed to the four general divisions of the department. Since the distribution of expense has been discussed in a preceding chapter devoted to the Commercial Banking Department, it seems unnecessary to set forth the details of the distribution to division of the Trust Department; the application is different, but the principle is the same.

DIVISIONAL OPERATIONS

Upon completion of the preliminary income and expense distribution, the results from operations may be set up by divisions. A typical operating statement of this kind follows:

"A" BANK AND TRUST COMPANY

DIVISIONAL OPERATION FOR THE YEAR 1932

Division	Fees Collected	Expense	Net Earnings
Custody division	$ 4,688.10	$ 4,315.22	$ 372.88
Escrow division	5,441.05	2,109.36	3,331.69
Trust and estate division	24,220.25	19,756.30	4,463.95
Corporate division	50,261.18	14,212.08	36,049.10
	$84,610.58	$40,392.96	$44,217.62
Deduct:			
New business expense	....	9,423.36	9,423.36
		$49,816.32	$34,794.26

Cost accounting within the division. Detailed cost accounting, within the division, presents some very difficult problems, and yet the establishment of standards of cost for comparison with fee schedules in force is a very necessary factor in the successful trust operation, and one which has been badly neglected in

practically all of the banks. In many cases schedules of fees have been placed in effect without regard for the costs of the services rendered, and as a consequence they have little or no relation to the actual work performed. Free services of a very costly nature have sprung up within the Trust Department. The very nature of the services rendered in that department—personal services—provides for an expensive operation. This is indeed a department wherein intelligent cost investigation, with consequent action to bring fees in line with costs of services performed, whether by individual action, association action, or legislation, should yield good returns.

The practical problem in connection with detailed trust-cost accounting arises from the fact that unit costs cannot be successfully applied to all operations, due to a lack of uniformity in the operations themselves. There are certain routine operations to which unit costs may be applied; there are other special operations which must be priced on the basis of the extent of the personal services rendered. An example of the routine services mentioned is the accounting for and care of securities and valuables; these services may be priced on a per-item or at least on a per-operation basis. Examples of special services are the care of real estate, the advising with or even sometimes the directing of the activities of beneficiaries, and more particularly the investment of trust funds. Trust-fund investment

does not parallel bank-fund investment, which has been placed on a per-thousand-dollar basis; rather, the investment of a thousand-dollar fund in one trust may outweigh, in time and attention and in actual out-of-pocket expense, the investment of a ten-thousand-dollar fund in another, since definite restrictions may have been placed upon the investment possibilities in the one case and no restrictions in the other.

For cost accounting purposes, it seems advisable to apply costs to trust accounts in three ways:

1. A maintenance or per-account charge to cover the actual dead carrying cost of each account, regardless of activity.
2. Item or operation costs for all services of a routine nature.
3. Special service costs for all services of an unusual or occasionally reoccurring nature. Tests show that a figure per hour of time expended, made up of 160 per cent of the salary of the person or persons rendering the service, is sufficient to pay the cost of maintaining and supervising a trust operator in an operating capacity.

The first step, then, in each division is to allot divisional expenses to the three classifications—account maintenance, routine services, and special services, each division's expense consisting of its own direct operating expenses of salaries and wages, rent, insurance, and so on, plus a share of the indirect expenses—the general

administrative expenses to be applied as a percentage to each base cost when derived.

Account maintenance expense is then allotted to each account on the basis of the number of accounts. Expenses of routine services are to be reduced to per-item or per-operation costs, due regard being had for the different time values existent in each operation.[1] Expenses of special services are to be allotted upon the basis of hours of special services rendered, a record of which must of course be maintained by the trust operator for the period under analysis.

APPLYING THE ANALYSIS

A brief discussion of the application of these principles to each of the four broad divisions of the Trust Department follows:

Safekeeping and/or custody division. Suppose that for a given period of time, as one year, the expense allotted to this division totaled $4,800; that $675 of this is allotted to the maintenance of the 900 accounts; that $900 is allotted to the special services rendered in connection with the investment of funds on behalf of certain of the custody accounts, the investments being made upon request of this division by the department's investment specialist; and that $3,225 is allotted to the routine service resulting from the care and safekeeping of securities.

[1]The finding of unit costs has been discussed in chapter XV in connection with the Commercial Banking Department.

Suppose that during the year the division received 1,500 deposits of securities (a deposit consisting of one or more items of like maker, series, and maturity); that it effected 1,250 releases of securities, and that 7,500 blocks of coupons (a block consisting of one or more coupons of like maker, series, and maturity) were handled.

To provide the basis for unit cost finding, the operations are to be either timed or counted. For example, it is found that the acceptance of a security deposit involves the following operations:

1. Examination of the security
2. Issuance of receipt
3. Preparation of vault deposit slip
4. Lodgment in vault under dual custody
5. Preparation of coupon and principal maturity tickler
6. Journal entry
7. Ledger posting
8. Filing copy of receipt

Suppose that in the present case it is found that unit values are: security deposit, 6 units; security releases, 4 units; coupon handling, 1 unit. Then the following table may be prepared:

	Number of Operations	Unit Value	Unit Operations	Per-Item Cost
Security deposit .	1,500	6	9,000	$0.90
Security release .	1,200	4	5,000	.60
Coupon handling	7,500	1	7,500	.15

When the administrative share has been added, the result is the per-item cost for use in analyzing an account of this character. (The figures used herein are theoretical, and are used purely to demonstrate the method. They should not be accepted as accurate figures for use in analysis.)

A simple form for the analysis of a custody account follows:

"A" BANK AND TRUST COMPANY
TRUST DEPARTMENT

Analysis of Custody Account No. . . . . of . . . . for the year 1932.

INCOME			
Year's fees accrued (see Fee Card)			$000
EXPENSE			
Routine services:			
Security deposits (. . . . . . at $. . . . . . .)	$00		
Security releases (. . . . . . at $. . . . .).	00		
Coupon service (. . . . . . at $. . . . . . .).	00	$00	
Special services:			
Investment service (. . . . . . hours at $ . . . . .).		00	
Account maintenance.		00	$000
Net profit.			$000

Upon analysis of a fair number of accounts under this method, it will be found that the usual basis of fees, set at so much per $1,000 of securities held in custody, does not provide an entirely equitable basis of charge. While security values should have a bearing upon the fee basis, still, activity also should be considered, and it is believed that the really equitable fee basis should consider activity primarily, and dollar volume only in light of the responsibility placed upon

the bank through the accepting and holding of securities. Such a plan would completely change the majority of the fee schedules in force throughout the country, and it may never be realized, but the fact remains that a charge based upon "personal service" plus "responsibility" is the *correct* charge in these instances.

Escrow service. While there are certain routine services to be performed in connection with escrow accounts, by far the larger part of this division's expenses have to do with special services rendered. The same general treatment accorded custody accounts applies also to escrows, and more particularly the same suggestion for fee treatment applies and to an even greater extent.

Trust and estate service. Except in the very large cities—the financial centers—the trust and estate division is the dominant factor in the Trust Department. There are so many varieties of services, and the extent to which each is required is so varied, that no detailed analysis is offered here. It will be found that the operations of this division may be analyzed upon exactly the same basis as has been prescribed for the safekeeping and custody division. To a considerable extent, fees may be based upon the results obtained from such an analysis. It is in this division that the trust officer must use care in the assessing of fees, since in many states the prices to be charged are

covered by law. Even in such cases, when extraordinary services are rendered they may be charged for. The trust officer should have a definite knowledge of costs so that prices may be made with due regard to the two principles: adequacy of fee and fairness to customer. A suggested form for analysis of accounts in this division follows:

"A" BANK AND TRUST COMPANY

TRUST DEPARTMENT

Analysis of trust account No. . . . of .... for the year 1932.

INCOME				
Year's fee accrued (see Fee Card)..				$000
EXPENSE				
Routine services:				
Security deposits............	(...... at $........)	$00		
Security releases	(... at $ .. ....)	00		
Coupon service	(...... at $ . . ..)	00		
Miscellaneous income entries	(.. .. at $ . . ...)	00		
Cash deposits	(...... at $.... ...)	00		
Fund distribution entries ...	(... . at $ ... .)	00		
			$000	
Special services:				
Foreclosure and real-estate supervision	(...... at $... ....)	00		
Trust administration	(.. .. at $ ....)	00		
Investment service	(.. . . at $ . . .)	00		
			000	
Maintenance cost			00	000
Net profit................				$000

Corporate service. Except for the cost of the close supervision which must be exercised over transactions in the corporate division, the operation is largely one of routine service. A suggested form for corporate account analysis follows.

"A" BANK AND TRUST COMPANY
Trust Department

Analysis of corporate account No. . of .... for the year 1932.

INCOME				
Year's fees accrued (see Fee Card)				$000
EXPENSE				
Routine services:				
Bond or coupon payment .....(. ... at $ . .....)		$00		
Cash deposits ... .(. . at $.)		00		
Stock certificates issued .. (.. . at $.)		00		
Stock posting (co-transfer agent) (. .. at $..)		00		
Certificates registered . ...(...... at $ .. . .)		00	$000	
Special services:				
Filing stockholders' lists ....(. . hours at $....)		00		
Other administration. .... (..... hours at $ . .)		00	000	
Account maintenance			00	000
Net profit....				$000

GENERAL CONSIDERATIONS

Cost accounting in the Trust Department is in its infancy. Except in the larger banks, the department's regular accounting is in a formative stage. There is a great amount of work to be performed, accounting wise, in this department, all leading to the two ends—a more efficient operation and a more equitable distribution of fee charges.

As an example, one bank found itself in the position of acting as co-trustee with an individual for an estate. Its practice had been, in such cases, to handle all details but to divide the fee equally with the individual. Due to a very unsatisfactory condition in the affairs of

this estate at the time it came to the Trust Department, the expense of handling practically equaled the fee. The bank reasoned that its out-of-pocket expense should be covered before the fee division took place, and now has established a rule to that effect, at a considerable annual saving.

Most bank problems are more easily solved after they have been reviewed in the light of a sensible cost-analysis treatment. In ending this series on the subject of "Bank Cost Analysis," the writer has a feeling of regret that it has not been possible to discuss the matter more fully, and more particularly in this instance there is present that feeling of futility which results from the inability to argue over the matter and to express personal opinions and experiences.

To many bankers, bank-cost accounting begins and ends with the establishment of certain analysis and service charges to be applied to the accounts of commercial customers. In this series of articles the main idea expressed has been along the line of improving the bank's profit from its contact with its customers. In the long run, however, such a program will be completely eclipsed by the program now under way in many banks leading to a cost control of their own operations, for, after all, it may be that bankers have started at the wrong end of this business and are requiring on the part of the customer an efficiency which even the bank does not as yet possess. Bank

administration that takes cognizance of customers' deficiencies is a necessary and proper thing; bank administration that also recognizes all of the bank's own deficiencies is an even more necessary and certainly a more proper and a more profitable thing.

CHAPTER XXI

THE EARNINGS POSITION

OF COURSE every bank operates for the purpose of making money for its owners. Long years of experience have taught bankers that for the bank to be healthy, to prosper, and to make money it must be built upon the basis of a worth-while service to the people of the community in which it is located, and it must be operated with that principle always in mind. The most worth-while banking service is that which cares for the legitimate banking needs of the customers for the longest period of time; in other words, permanency is one of the customers' most insistent requirements. If a bank is to be permanent, it must make money—a healthy amount of money.

A realization of this interdependence between the bank and its customers—the need on the part of the bank for the confidence and support of its customers and the need on the part of the customers for a continuous fair banking service—leads to the thought that the bank must be always in a good earnings position. In the last analysis, the measure of the success of the banking operation lies in the consistency with which it earns, the expectation of earnings being the reason for the origination of the bank, and the realization of a fair

earning making it possible to perpetuate its life indefinitely.

The net earnings of the bank represent that portion of the bank's income which remains after all expenses have been paid and all losses have been charged off; they represent the amount left over for the owners, either to be withdrawn in dividends or left in the bank to increase the stock value and to provide additional protection to the bank's customers. Each paragraph in this series of discussions has been written with this eventual earning result in mind, and each of the subjects discussed has had, therefore, a bearing upon that objective.

There are a number of major factors which contribute to the level of the bank's earning position. In order to appreciate the place each of these factors takes in the final picture, it is necessary to have a proper conception of the real nature of the banking operation. It is, in short, a merchandising process, the commodity being, in the main, "bank funds." Of course there are many side lines in which banks may engage—such as the selling of securities and the operation of trusts—but in the average bank *the big operation is that of buying funds at one price and selling at a higher price, the difference representing profit or net earnings.*

We shall consider first the buying side of the business, termed for convenience the "acquisition of bank funds."

ACQUISITION OF BANK FUNDS

The cost of bank funds is made up of the interest paid to depositors and the expense of rendering service to depositors. These two classifications of expense constitute by far the larger part of the total expense account, and they therefore exercise a great influence on the final figures of net earnings. Whenever the bank adds a new facility or a new service for the conveniences of its depositing customers, it increases the cost of bank funds—the commodity in which it deals and which it must sell in order to create income.

In considering this phase of the banking business, it should be remembered that to create a profit a commodity must be bought at a fair price and sold advantageously, and if the price paid for it is unnecessarily high, then to that extent the door to profits is closed even before the selling operation begins. So with bank funds, the banker cannot expect to make money if he maintains a costly acquisition program, whether it be one of excessive interest to depositors or over-elaborateness in the service facilities, either or both.

At the same time the banker is considering his fund acquisition program he should also give attention to the matter of "selling" funds, both those belonging to depositors and those belonging to the bank—capital, surplus, and undivided profits. This selling process may be termed the "conversion of bank funds."

CONVERSION OF BANK FUNDS

Bank funds are to be utilized in such a manner that they will produce the best possible rate of income and yet be susceptible to a progressive program of conversion into cash to meet both the normal and the abnormal demands of customers who may desire to make withdrawals. In the order of their probable relative importance, then, the two conversion principles are liquidity and adequacy of income.

Liquidity. This principle has had a great amount of consideration, particularly during recent months. Even though so many communities have suffered through a poor liquidity factor in their banks, yet there is available a wealth of information on this subject, and it is mentioned here only because the necessity for a healthy liquidity factor imposes a definite limitation upon the income possibilities from the conversion of bank funds.

Income. From the earning assets into which bank funds are converted, the bank receives the major part of its income. When all available funds have been converted, there is a share which produces no income, since it must be retained in cash or its equivalent—the reserve at the Federal Reserve Bank. Another share, represented by funds deposited in other banks, produces at a low rate. Still another share, constituting the bank's secondary reserve and invested in government bonds, prime commercial paper, call loans, and

other immediately convertible paper, produces at a somewhat higher rate, and so on, through the classification of bond investments to the backbone of the investment field for banks—the local loans and discounts—which produce income at the highest rate the bank receives. The average rate of income from all funds, after a satisfactory degree of liquidity has been attained, when adjusted to care for conversion expense and losses, is the measure of the efficiency of the conversion operation.

Expenses of conversion. It costs money to maintain a conversion organization even in the small bank. Expenses chargeable to conversion include the costs of supervising the bank's cash and/or reserve position; the buying, caring for, and selling of securities and paper; the lending to local customers, with accompanying maintenance of credit information and discount and collateral handling facilities; and finally, providing for the collection of principal and interest, employed in any or all of these ways.

Losses. It is inevitable that the bank will sustain losses from some of its investments and loans. If the bank operates to the benefit of its community, it ought to have a fair loss experience. But losses must be controlled. Just as a fair net earning is impossible if the fund acquisition program is not controlled, so it is impossible to realize a fair net earning if losses are too frequent. To some extent the striving for high rates

of return leads to increased loss ratios. There is no desirable end to be gained through creating a high rate of income only to charge off the excess in losses; it is better to be temperate in all things, to make fair investments and good loans at reasonable rates, and with a fair loss experience.

Net income from conversion. The net income from conversion is the balance of the income created by all of the bank's earning assets after conversion expenses and losses have been cared for. Therein lies the real measure of the conversion operation. It is this net income that must pay the expenses incident to the acquisition of funds and provide whatever net earnings the bank has from the entire operation.

SUMMARY OF THE BANKING OPERATION

Figure 36 is a graphical exposition of the commercial banking operation. The year's operating figures of any bank will show whether the net earnings experience is good or bad. An analysis similar to that shown in Fig. 36 will show why it is good or why it is bad. This is the ultimate of all bank cost accounting. From a simple analysis of the bank's main operating factors the answer to the perplexing problem of insufficient net earnings may be read. The correction—sometimes a difficult thing to accomplish—frequently requires a great deal of courage. That is the job for each individual banker.

A study of the banking skeleton set forth in Fig. 36 must lead to the following conclusions:

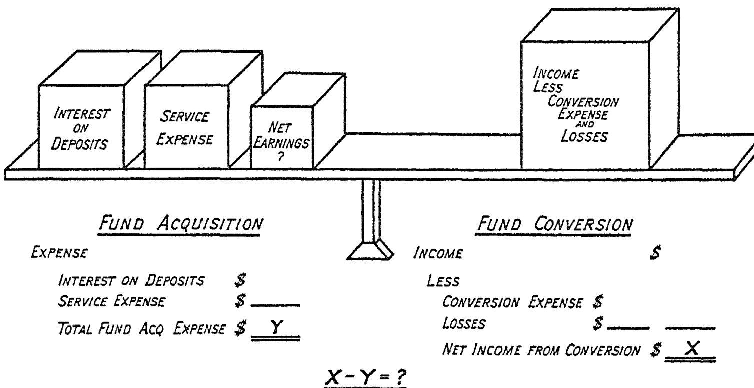

FIG. 36. A chart showing the commercial banking operation

1. The problems of fund acquisition and fund conversion are equally vital in the banking operation.
2. Unless funds are acquired at a fair price, the final net earnings are bound to be disappointing—no amount of ingenuity exercised in their employment can serve to recover those amounts needlessly expended.
3. Unless the bank has an intelligent fund conversion administration, the entire operation is futile, since the bank either will be embarrassed through lack of liquidity or else it will realize insufficient net income from conversion to pay acquisition costs. Sharp minds are required to guide the bank through periods of stress.

4. Fund acquisition costs may be scientifically controlled through:
   a. Interest payment based upon analysis. At least two major cities in America so control interest payments by Clearing House rule that unwise interest arrangements are impossible. The principle involves a quick analysis of the account, using standard costs, with deduction from interest of any excess of expenses over income. For this purpose, desired profit is cared for in setting the standard income allowance.
   b. Account analysis (both individual analysis for large accounts and group analysis or service charge for small accounts) scientifically based and intelligently and courageously applied. Realize that the real mission of account analysis is to build profitable accounts, and that charges to accounts covering excessive service requirements are but a temporary means of "stopping loss," except in isolated cases.
5. Even in the small bank the administration of the fund conversion program provides "plenty of job" for one man. Such a man should be a student of financial management, and he should have no time to spend on operating matters.
6. It has been said that the measure of efficiency in fund conversion lies in the two things: liquidity

of the bank and net income from conversion. The best talent obtainable is not too good for this bank job.

7. Losses can and must be minimized. The lesson most bankers must learn is when to take a loss—while it is in a minimized amount, or after the whole sad story has developed and interest for a year or two on the recoverable amount has been sent after lost principal.
8. Most bankers have the urge to develop new lines of banking activity and to add new merchandizing departments to the bank. Such steps may well be carefully analyzed in the average case and, if taken, they should be pursued with caution. Such additions tend to multiply administrative problems.

Last of all, it must be understood that a successful banking operation depends upon men, not systems. Examination of case after case will show that the most satisfactory earnings are realized by those banks wherein the active management is identical with, or intimately associated with, the proprietorship, and wherein the management has not only a full appreciation of the important basic operating factors but also the gift of inspiring their associates and employees with a like appreciation.